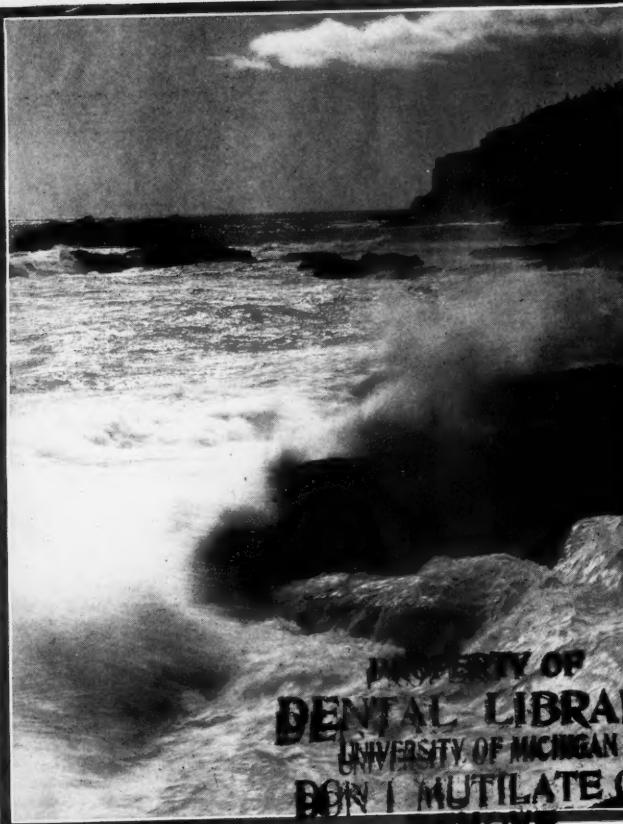


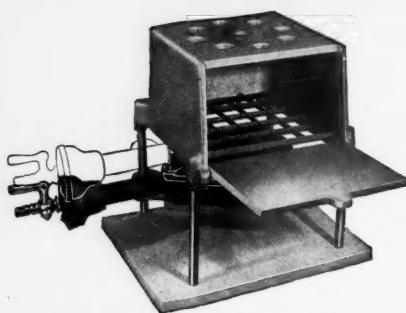
# THE DENTAL DIGEST



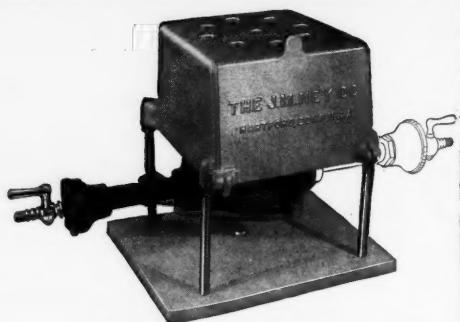
**SEPTEMBER 1926**

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# CONTENTS

VOL. XXXII SEPTEMBER, 1926

No. 9

## CONTRIBUTED ARTICLES

Angioneurotic Edema	JAMES L. ZEMSKY, D.D.S.	593
What Arrested This Decay?	E. S. ULSAVER, D.D.S.	601
Old World Wanderings of An American Dentist,	JOHN JACOB POSNER, D.D.S.	603
Plaster versus Compound for Lower Impressions	F. M. HIGHT, D.D.S.	608
Testimonial Dinner Tendered to C. Edmund Kells		609
Report on the Human Mental Foramen With Three So-Called Accessory Mental Foramina	YOSHIMI MATSUDA, D.D.S.	610
Ethical Advertising in Dentistry	NORMAN DOUGLAS, D.D.S.	613
Dental X-Ray Examinations	ARCHIE A. ALBERT, D.M.D.	617
Togo's "Discussions"		621
The Dentist and Dentistry	HARRY BEAR, D.D.S.	623
How Digest Articles Find Their Way Around the World		626
The Latest Developments of the Articulation Problem	WILHELM BALTERS	627
Dental Laws	ALPHONSO IRWIN, D.D.S.	634
DENTAL ECONOMICS		644
PRACTICAL HINTS		646
CORRESPONDENCE		653
DENTAL SECRETARIES AND ASSISTANTS		654
EXTRactions		658
DIETETICS AND HEALTH		659
BOOKS RECEIVED		661
FUTURE EVENTS		663



# THE DENTAL DIGEST

GEORGE WOOD CLAPP, D.D.S., EDITOR

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## OUR COVER THIS MONTH

Our cover picture shows a typical scene to be found along the coast line of Maine. Over twelve hundred islands border the rocky shore of this State, the one in the picture being Mt. Desert Island. Because of the countless indentations the coast line of Maine is estimated at 2500 miles, although as the crow flies it is about 250 miles. This coast is a region of extreme weather phenomena during the winter season. The fierce gales that sweep over these outlying islands wash them clean, not only of their scant vegetation, but of the thin layers of soil also, leaving a bare and stony landscape. If you plan a visit to Mt. Desert Island take along a pail or two of earth and the lightkeepers will receive you with open arms. This is the rarest commodity they have.

Maine is sometimes referred to as a "great stone state," on account of its granite and other useful stones. However, it also has dense forests in the lowlands, and these have brought in the paper and wood pulp people, who have established great industries along this line. Maine's mineral springs are regarded as among the most important in the world.

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# THE DENTAL DIGEST

Vol. XXXII

SEPTEMBER, 1926

No. 9

## Angioneurotic Edema\* (QUINCKE'S DISEASE)

By James L. Zemsky, D.D.S., New York, N. Y.

Attending Surgeon, Oral Surgery Department; Chief and Director of Surgical Periodontia Department, Midtown Hospital.

Angioneurotic edema is a rare disease in the practice of medicine, therefore a few words of explanation as to why the writer has chosen to present such a subject in a periodical devoted to the interests of the dental profession is not out of place.

It may have been observed that the laity generally regards a swollen jaw as a condition caused by diseased teeth, and consequently patients with such symptoms consult the dental practitioner. Not being able to differentiate a swollen jaw from other swellings of the face, it not infrequently happens that patients with such swellings, although caused by other than dental disturbances, also come to the dental surgeon for relief, hence a knowledge of all such conditions is desirable for the dental practitioner. There are a number of various lesions presenting swellings of the face and the dental practitioner is trained to recognize a great many of these various maladies. Having diagnosed such a condition, he either proceeds to treat it himself when it belongs to his domain or, if it is found to be not of oral origin, refers the patient to his medical confrères.

Among the numerous systemic disturbances causing swellings of the face, lips and mucous membrane of the palate, there is one particular condition which is not common. Although its symptoms are so well defined that the nature of the disease ought to be self-evident, it has been the experience of the writer that these cases are far from being generally and readily recognized. The fact that this condition is so infrequent easily accounts for it. Unless the practitioner has come across this lesion before, it often goes unrecognized and is regarded simply as a puzzling proposition.

Bearing this in mind, the writer wishes to present a short discussion of this somewhat strange condition known by various names, such as angioneurotic edema, giant urticaria, blue edema of Charcot, hysterical edema with vasomotor phenomena, Quincke's disease, the hysterical

\* This article was received in October, 1925.

paroxysmal edema of Edgeworth, urticaria edematous Hardy, acute circumscribed edema, acute essential edema, acute idiopathic edema, acute toxic neuropathic edema, wandering edema, hereditary edema, intermittent edema, etc. From the numerous names that have been employed in its nomenclature one can at once realize that this condition is characterized by marked inexactitude of knowledge as to its etiology and pathology, in spite of the fact that the condition had been observed and recorded almost half a century ago. "Indeed," remarks one writer, "everything is indefinite about this lesion, except the clinical aspect which is so startlingly apparent." This is very important and for our purpose quite fortunate.

As the dental surgeon is not called upon to treat cases of angioneurotic edema, whether its etiology, pathology and therapeutics are well understood or not, is of little significance to him. The important point, as far as he is concerned, lies in the fact that the clinical aspect of angioneurotic edema is *strangely apparent*, thus making it possible to diagnose the lesion without great difficulty. In order that one should be able to do this, a knowledge of the clinical picture of this lesion is all that is necessary and the author therefore will make an effort to present such a picture here.

While, as stated before, the vague etiology, pathology and therapeutics of this strange affliction of men, women and children are of little significance, nevertheless knowledge about it is desirable for the doctor who sees the case, even though the treatment does not belong to his domain. With this in view, a brief account of the various phases of this condition is herewith offered.

#### CHARACTER OF THE LESION

In 1876 the syndrome was described for the first time by Milton and about six years later there appeared a short paper in a German periodical by Professor Quincke, who viewed the condition as a "*form of vascular neurosis* capable of being clinically separated from all other forms of local edema." The observed characteristic features are "periodic appearance of transitory local swellings which occur on the skin and mucous or synovial membrane, the trunk, feet, hands, *face, lips, and mouth* being its usual site . . . ."

#### SYMPTOMS

The onset is always sudden. The swelling is pale bluish white or opaque in color and produces no inflammation or local pain. Besides these acute, circumscribed, edematous, translucent and waxen swellings appearing more or less periodically, lasting usually a short time and then disappearing entirely, abdominal symptoms may be present, comprising nausea, anorexia, severe colic and vomiting. Numerous cases

have been reported in which abdominal symptoms were the only symptoms present. Such patients obviously do not come to the dentist for advice and therefore his task in diagnosing this condition is much simplified, since it is confined only to those cases which present the characteristic facial swellings. Besides these typical swellings and abdominal symptoms, not infrequently itching, heat and redness may be present, as well as headache, somnolence, vertigo and mental depression.

#### ETIOLOGY

The angioneurotic edema, as already noted, has always been obscure, and until the students of anaphylaxis and allergy began to publish their results it was usually regarded as a distinct disease of undecided origin. At the present time it seems to be fairly well established that at least certain types of angioneurotic edema are merely expressions of hypersensitivity and not a disease *per se*. It has been noted that there is a striking similarity between the clinical picture of anaphylaxis and that of angioneurotic edema.

According to some investigators, "psychic influences seem to call forth the attack." The great emotions of fear and anger or prolonged and arduous mental application have been observed immediately to precede the first attack. Nervous influences, auto-intoxication from intestinal tracts, intoxication from drugs, alcohol, hereditary rheumatism, malaria, menstrual disturbances, trauma and even *contact* with certain types of proteins have been regarded to have etiological significance.

#### PROGNOSIS

A careful study of all the reported cases brings the conclusion that unless the disease attacks the mucous membrane, it is ordinarily simply a nuisance. When the mucous membrane of the throat is affected, it becomes serious and not infrequently even fatal, sudden death occurring from edema of the glottis and larynx. It has been estimated that the death rate from edema of the glottis in all the reported cases of angioneurotic edema is 21.1 per cent.

#### TREATMENT

The results of the treatment have been negligible and the treatment itself seems to be highly empirical. Many drugs have been used in a blind sort of way, among these nitroglycerine and nitrates, which are claimed to have warded off the attacks for months. Electricity, vibration and phototherapy have been resorted to with the idea of establishing a healthy nutrition and so obliterating the effective cause of edema. Change of diet and elimination of certain kinds of offending proteins from it are followed at times by amelioration of symptoms.

In angioneurotic edema of the throat quickest relief is obtained by injection of adrenalin chloride. Desperate cases have been saved only by immediate intubation or tracheotomy.

From these considerations it is evident that the disease is a vaso-motor disturbance or a neurosis of vasomotor origin and has not yet been altogether understood.

#### REPORT OF CASES

During the past year four cases of angioneurotic edema came under observation of the writer in both his private practice and hospital work. Based on careful clinical examination, including the various laboratory

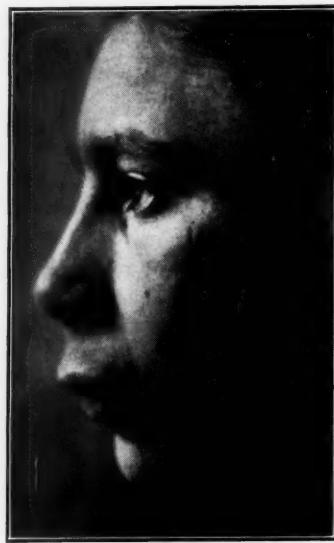


Fig. 1

This illustration shows the appearance of the face during the attack (Case 1). Edema of the upper lip is very noticeable.

tests and complete history, a diagnosis of angioneurotic edema was arrived at, which later on was confirmed by other practitioners. The writer presents these cases, not because of their striking interest but rather for the purpose of adding more directness to the presentation, which he hopes will prove of some help to his fellow practitioners when such a case presents itself.

*Case 1.* Patient, George B., 16 years old. Complained of swellings appearing on the upper lip and the right cheek. History revealed that the swelling had been present from the earliest day of his existence.

The diagnosis of angioneurotic edema was made at the time when the patient was only a few weeks old. At the age of two, the patient received radium treatment, which continued for over a year without any benefit to him. At the age of six, alcohol injections were made in the lip, also without having any effect on the condition. Later on, the patient was given a course of vaccine treatment, but this also did not seem to do him any good. Just prior to the appearance of the patient at the hospital he had been laid up with erysipelas, and it was at the suggestion of his physician that he came to the clinic to ascertain whether the oral structures might not have something to do

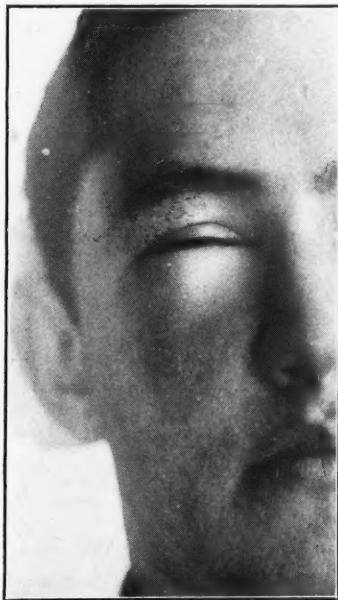


Fig. 2

Showing the extent of the swelling of the eyelids in Case 2. The photograph was taken during one of the acute attacks.

with his condition. Radiographic and clinical examinations proved negative, and the patient's condition was diagnosed as angioneurotic edema.

*Case 2.* Mr. Sam M., 20 years of age. Had been suffering from edematous swellings for five months. The first attack was preceded by severe headaches for a period of over three years. The swelling would usually appear overnight and localize around the right eyelids

and the right side of the face. There was no pain present at any time and the swelling, after persisting for a few hours, would disappear. No other disturbance of health was observed.

*Case 3.* Mr. S., 42 years of age, of medium size, well nourished and developed, an engineer by profession, stated that he had been troubled with swellings of his lips, which occurred suddenly about seventeen years ago. Until about four years ago, these swellings used to appear every four or five months and were confined to the middle and the right half of the upper lip. About four years ago, the swelling disappeared and had not recurred for over a year but then appeared again, this time spreading to the right side of the lower lip. After a week or so it decreased in size and remained in this state for five



Fig. 3

A photograph of the patient described in Case 3. It was taken at the time the attack was just passing away. The upper lip regained its normal appearance, while the lower still shows signs of considerable edema.

months. Since then, these swellings recurred regularly every four or five months, involving both lips. Patient had noticed that smoking of "cheap" cigars aggravated the condition and seemed even to bring on the attack. He had also observed that acid food had an effect upon the swelling. An examination of the mouth and its associated parts did not disclose any condition which might have given rise to the symptoms described. The case was diagnosed as that of angioneurotic edema.

*Case 4.* Mr. M. B., aged 60. About a year ago there suddenly developed a very marked swelling on the right side of the face which closed the eye on that side. The swelling lasted a few hours and then disappeared. Similar attacks occurred at intervals of three and four months, making four attacks during the year. No pain was present at any time during these attacks. The patient suffered from nervousness and high blood pressure, hyperthyroidism with tachycardia. He

was treated with x-rays without any benefit. Roentgenographic examination of the mouth and its adnexa proved to be negative. The case was diagnosed as angioneurotic edema, which diagnosis later on was confirmed by other men.

#### SUMMARY

The first record of angioneurotic edema appeared nearly half a century ago and since then many cases have been observed. This condition is looked upon as a neurosis of vasomotor origin, the etiology of which is not definitely known, although direct inheritance has been determined to play some part in many instances. Ingestion of certain

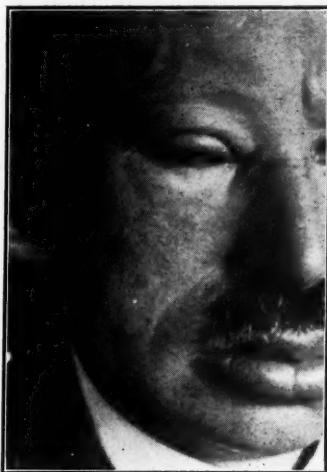


Fig. 4

Marked edema of the right eyelids and of the lower lip during the attack described in Case 4 are well illustrated in this photograph.

proteins or merely a contact with them has some etiological significance. In some instances psychic influences have been observed to bring on the attack.

Regarding its pathology, the most recent views held by various investigators maintain that the condition is not a disease *per se*, but owing to its resemblance to anaphylaxis it must be a form of hypersensitivity.

Therapeutics, just as the pathology and etiology of angioneurotic edema, is unsatisfactory, being highly empirical. It comprises the administration of various drugs, modification of diet, physiotherapy and, in certain cases, surgery.

Prognosis is not unfavorable, its death rate being about twenty per cent, due mainly to edema of pharynx and glottis.

The clinical feature is the only definite phase of the condition, though there are variations. A typical case is characterized by a periodic, sudden appearance of circumscribed edematous swellings of pale or bluish white color, lasting only a short time and in some cases accompanied by abdominal symptoms.

The recognition of the almost pathognomonic clinical symptoms with a carefully obtained history makes the diagnosis of angioneurotic edema easy.

Harvey Building, 355 East 149th Street

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## What Arrested This Decay?

By E. S. Ulsaver, D.D.S., New Rochelle, N. Y.

M. T., a girl to delight the eyes, now seventeen years of age, has been under my constant care for the past eleven years. Both her father and her mother had trouble with their teeth and have taken excellent care of their children's teeth. The parents are intelligent, sensible and sufficiently well-to-do to give their children every necessary advantage. The baby teeth of this patient did not give more than the usual amount of trouble. The temporary molars developed cavities, which were filled with copper cement and refilled when those fillings wore off.

About the beginning of 1925 this patient presented with the beginnings of cavities along the gingival margins of the cuspids and on the bicuspids and molars. She had been in the office a short time before and the teeth had been cleaned and polished. At that time there was not a sign of trouble. In addition to frequent supervision and care in the office, the teeth had received good home care.

This condition came on with appalling suddenness. The beginnings were in the form of white lime and a chalky condition of the enamel, showing decalcification. The condition progressed so rapidly that in a short time after the last visit the enamel of some of the teeth was decalcified to the dentine.

With fine polishing stones, discs and rubber wheels the decalcified enamel was polished off, even when it went clear through to the dentine. The decalcified areas were then painted with silver nitrate, followed by formalin.

I was seriously upset about the condition of these teeth. The children of the family had been in my hands for years and I felt responsible for their dental welfare. Because of the rapid and severe onset of this condition I feared I should not be able to arrest it and I felt as if the bottom was falling out of things. Unless something could be done by means of diet to arrest this attack, I did not see any way of saving the teeth.

The girl was seriously disturbed about the condition of her teeth and readily agreed to follow the necessary form of diet. She was restricted to a small amount of candy daily, immediately after meals. She was to limit herself also as to the amount of other sweets, such as desserts, cakes, etc. She did not care much for vegetables, but agreed to eat at least one vegetable at each meal. She was so strict about it that she insisted that her mother give her a vegetable for breakfast. This was later changed to a liberal supply of orange juice. The patient has rigidly adhered to the program and has taken considerable quantities of orange juice. During the year since this pro-

gram was put into effect, one new cavity, similar in character to the others, has developed. The cavities which appeared so suddenly have had a second treatment of silver nitrate. The attack seems to have been arrested because the cavities have not changed during the last twelve months.

Some dentists may object to the dark stains along the cervical margins of these teeth from the application of silver nitrate. The relief experienced by the patient, the family and myself at the arrest of the attack is so great that we are all satisfied to allow the dark stains to remain a few years, after which the cavities can be filled with porcelain. The patient is a beautiful girl, the stains show very rarely and are not a disfigurement.

In another case in which similar cavities developed in a similarly sudden manner along the cervical margin of some upper anteriors which are very prominent, the decalcified enamel was polished out in the same manner and vegetables and a liberal amount of orange juice were prescribed daily. Because of the prominence of these teeth the silver nitrate was not applied. It is yet too soon to state whether or not the attack will be arrested under the influence of the diet without the use of silver nitrate.

Professional Building.



## Old World Wanderings of An American Dentist

By John Jacob Posner, D.D.S., New York, N. Y.

Visiting Dental Surgeon, St. Luke's Hospital

### EGYPT

On entering the harbor at Alexandria, Egypt, the natives come swarming over the ship's side for all the world like a boarding crew in the good old pirate days. And they easily look the part. These are the dragomans or guides, and you are not permitted to go through the customs without having first secured the services of one of these thoroughbred extortioners.



Fig. 1.  
A modern Cleopatra.

In this country you are at once struck by the odd costumes. The turbaned men wear long, sweeping garments resembling nightgowns, and the women are dressed in black robes with a lace veil shielding the lower part of the face. Down the bridge of the nose a golden cylinder is suspended, so that only a pair of flashing black eyes is visible, made more intriguing through the cunning application of charcoal.

Of all lands none exceeds Egypt in the spell of its mysterious charms. The Sphinx, the Pyramids, the temples and tombs of the Pharaohs who ruled over this strange country with its wealth of beauty and splendor fill the imagination. Cairo itself is rich in romance. The curious bazaars, the towering mosques, the queer, narrow streets



Fig. 2.  
A corner of the Great Pyramid.

with their teeming tides of colorful humanity, all are sources of unceasing interest.

It takes only one hour to go out to the Pyramids by trolley. Here on the edge of the desert are seven ancient Pyramids, the largest having been built by King Cheops. His mummy was discovered in a specially built room in the center of this strange monument. Only a short time ago there was found near by the tomb of the father of



Fig. 3.  
The Sphinx being repaired.



Fig. 4.  
Ruins at Karnak.

Cheops, and it is expected that much will be learned regarding the life and times of this remarkable man.

From a distance, the first impression of a Pyramid is disappointing. It is not nearly so large as one would expect. Later, however, by walking around the base, the enormous size of the structure becomes evident. Each side of the base has a length of four city blocks! The limestone was quarried on the opposite side of the Nile, ferried across and raised to position piece by piece in a manner which still remains one of the inscrutable mysteries of the past. Ten years were consumed



Fig. 5.  
Author and guide in Egypt.



Fig. 6.  
Water-carriers of the Nile.

in merely cutting the stone, and after twenty years more of unrelenting toil the Pyramid was complete. Nearby stands the Sphinx, carved from a solid piece of rock, still gazing out over the desert sands after sixty centuries.

Taking the train at Cairo, I journeyed five hundred miles down the Nile to Luxor. The Temple of Luxor is one of the finest specimens of Egyptian art. An hour's walk brings you to Karnak, the scene of the world's most gorgeous ruins. Here we find acres of columns, temples,

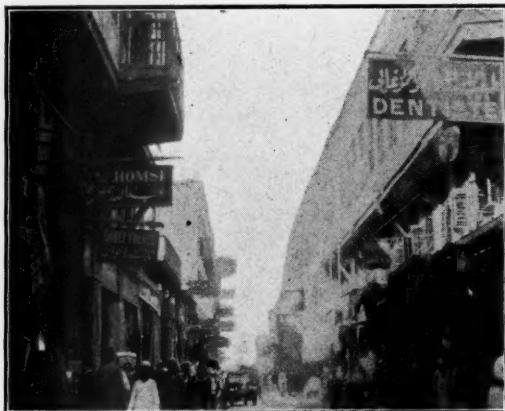


Fig. 7.  
A dental office in Cairo.

and buildings built by many Pharaohs. Rameses II not merely added to the collection, but erased the names of many of the previous builders and chiseled in his own.

With a guide, a donkey-keeper and two donkeys, we all piled into a flat-bottomed boat and were rowed across the Nile to Thebes. After several hours of travel we reached the Valley of the Queens and the Valley of the Kings. It is in the latter place that the tomb of King Tut-ankh-amen was found. The donkey-keeper ran all the way barefoot, over sharp, flinty stones in a terrific heat, and at no time did he show evidence of fatigue. Coming back, this fellow did the last six miles without a halt, always at a lively trot, so that I would be sure to catch the last train back to Cairo.



Fig. 8.  
Schoolboys in Alexandria.

Dentistry in Cairo is primitive. Men with licenses from all parts of the world have drifted to this busy crossroad of the East. The greatest number consists of illegal practitioners, and the type of dentistry itself is wretched.

There was once a dental society in Cairo—just once! It was organized by one man, and the opening meeting drew a large attendance. He read a paper on *How I Make Bridgework and Platework by Photography*. It seems that it was only necessary for him to take a picture of the patient and from this picture the dental appliance was constructed without plaster impressions, bite or other commonplace methods employed by ordinary dentists.

Nobody was asked to discuss the paper and nobody refused. After

a heated argument in which the word "fake" was freely used, the meeting and the society broke up simultaneously. The next day's newspapers had pictures of the organizer with a complete description of his marvelous system of dentistry. It was quickly evident that the whole thing was a cleverly arranged bit of quackery. There has been no dental society in Cairo since.

152 West 42nd Street.

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## Plaster versus Compound for Lower Impressions

Notes from a Clinic Given by  
F. M. Hight, D.D.S., Houston, Texas

Plaster will give about the same results as modeling compound in cases where the ridge is large and the buccal and lingual side walls are high enough to permit good adaptation of the plate. But in the great majority of cases I find that modeling compound impressions permit better adaptation and fit of the finished dentures and greater stability than plaster impressions.

Most dentists believe in the displacement of soft tissue. If you believe in postdamming an upper denture, why not do the same thing for the lower denture? The condition at the heels of most lower cases is similar to that at the posterior margin of most upper cases. The soft tissue there can be displaced, not compressed, so that there will be a curtain of soft tissue fitting against the distal border of the lower impression or denture. That will give greater "suction" and stability than is possible from a plaster impression.

The average plaster impression of a lower does not show such good adaptation at the periphery as a properly taken compound impression shows. The margin of the average plaster impression shows a turning away from the ridge, and there is often a space between the periphery and the denture from such an impression and the ridge. There is no necessity for such a space. It can be eliminated by the use of compound impressions without strangulation of tissue. If the compound impressions are muscle-trimmed in the mouth, they are apt to show the same defect at the margin as the plaster impressions, but if such impressions are trimmed with a knife, there need be no such space.

It is difficult to learn to extend the borders of an impression properly, and it is still more difficult to teach it. The degree of extension is individual in each case.



## The Odontographic Society of Chicago\*

ANNOUNCES

A TESTIMONIAL DINNER TO BE GIVEN IN HONOR OF

### C. EDMUND KELLS OF NEW ORLEANS, LA.

Dr. Kells is one of dentistry's most devoted disciples and one of its most active, versatile and beloved representatives. He was also the first American dentist to apply the roentgenogram to the practice of dentistry.

A special literary feature coincident with the dinner will embrace a symposium on

#### THE DENTAL HYGIENIST

BY

DR. KELLS, as the guest of honor

DR. THOMAS J. BARRETT, Worcester, Mass.

DR. ALFRED C. FONES, Bridgeport, Conn.

The problem of the dental hygienist is one of the most important issues confronting the dental profession today, and the essayists selected, together with Dr. Kells, are the most brilliant thinkers and writers on this subject at the present time.

The testimonial dinner is a deserving tribute to Dr. Kells, and the literary feature will be an educational treat to all present and should aid much in solving this problem for the future.

Every ethical dentist throughout the United States and Canada is cordially invited to be present on this occasion.

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THE DINNER AND DISCUSSION WILL BE HELD IN THE

GRAND BALL ROOM

HOTEL LA SALLE, CHICAGO

THURSDAY EVENING, OCTOBER 21, 1926

AT SIX O'CLOCK

---

Remember the date and help to make this occasion a fitting honor to one of dentistry's most active and lovable characters by being present.

DEWITT C. BACON, President,

31 North State Street, Chicago.

HART J. GOSLEE, Program Committee,

108 North State Street, Chicago.

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\* The prominence given to this announcement is evidence of the editors' enthusiastic endorsement of this fitting tribute to Dr. Kells, whose endearing personality and useful life have enshrined him in the hearts of the dentists of America.

## Report On the Human Mental Foramen With Three So-Called Accessory Mental Foramina

By Yoshimi Matsuda, D.D.S., Philadelphia, Pa.

From the anatomical viewpoint it is acknowledged that human beings should always have one mental foramen on each side of the mandible. Articles relating to this fact are few, owing to the lack of experimentation.

I do not wish to discuss at this time the location of the mental foramen from my statistical observations, as I have already made mention of it. To determine the location of the mental foramen, I will report just a few cases having the so-called accessory mental, which I discovered during my investigations at the Wistar Institute of Philadelphia and the American Museum of Natural History of New York.

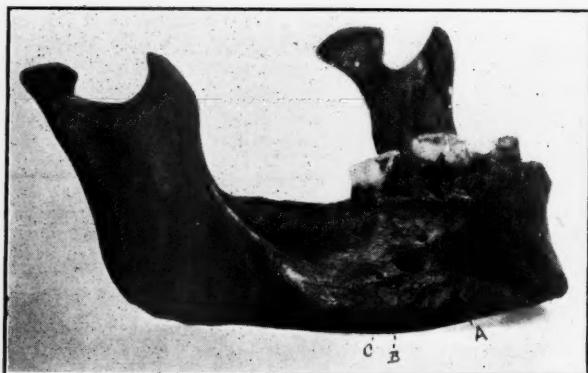


Fig. 1

From people of thirteen nationalities, such as Mexicans, Peruvians, Bolivians, Germans, Tasmanians, New Zealanders, Australians, Japanese, Egyptians, Eskimos, Africans, American Indians and Italians, three cases were Africans with two so-called accessory mental foramina in addition to one regular mental foramen; one case of the same race had four mental foramina, including the so-called accessory mental foramina, while the other case having multiple foramina was an Egyptian.

It would be more suitable to say "so-called accessory mental foramina" rather than to call it "abnormal," because it might be accurately accessory to the regular mental foramen.

The following illustrations show the mental foramen with so-called accessory mental foramina.

## 1. EGYPTIAN. (FIG. 1)

Figure 1 shows the so-called mental foramina encircling the one regular mental foramen, which has grown to extraordinary size.

A is located at the end of the margin of this foramen, B and C are just below the inferior margin of the regular mental foramen on the line of the external oblique line. They are all connected by the regular foramen to the mandible canal.

Upon examination it is found that the regular mental foramen is located below the lower second bicuspid and one of the so-called accessory mental foramina is located below, between the lower first and second bicuspids. C, another accessory mental foramen, is located below the region of the mesio-buccal part of the lower first molar, and B (foramen) is just below the distal edge of the inferior margin of the regular mental foramen.

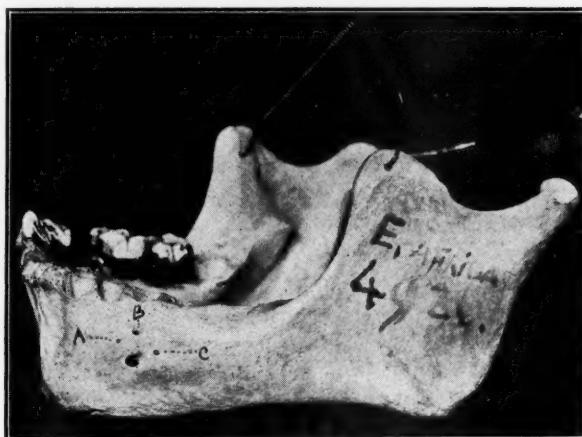


Fig. 2

## 2. EAST AFRICAN. (FIG. 2)

Figure 2 shows one regular mental foramen and three so-called mental foramina on the left side, forming a square. The regular mental foramen is larger than the others, but these all communicate with the regular mental foramen. The mental foramen and one of the so-called accessory mental foramina, B, are located below the lower second bicuspid, and the other accessory foramen, A, is located below the lower second bicuspid and the first molar.

From this report we can hardly believe that the human mandible which has more than three mental foramina, including the so-called accessory mental foramina, is seldom found. It is hardly possible that

a skull such as I have mentioned could be found in the modern civilized races.

Generally speaking, there is a tendency toward the occurrence of three foramina arranged in the form of an equilateral triangle or in irregular form.

If in the case there are four foramina, as I have just mentioned, they are arranged in the form of a square or an irregular square.

This is an interesting problem both to the dentist and to the anthropologist who are investigating their cause.

Though this report is very simple, I am very glad to be able to add these cases to those already found.

Finally, I wish to express my great thanks to Mr. S. Ichikawa of the American Museum of Natural History, who so kindly took these photographs for me.

3926 Pine Street.



## Ethical Advertising In Dentistry

By Norman Douglas, D.D.S., Owen Sound, Ontario

THE DENTAL DIGEST has wisely acknowledged and encouraged discussions relating to the business side of dentistry. We know the importance of articles on research and other questions, but this business end also can be described in no other way than as vital.

In the past few years views and discussions from different angles have been invited. Some have condemned the advertiser; this gentleman in turn has contributed arguments for his side, and, possibly best of all, we have been introduced to "Brother Bill" in a series of practical letters. Each thesis contained much food for thought, much of common sense and of benefit for the reader. However, no one has pointed out that there is an ethical way to advertise that brings sure results, which are more lasting, more satisfying and, generally, more lucrative.

Let us start with the graduate who has just equipped his office, hung out his sign and says to the world, "Come in." He is like the marksman who goes forth, rifle in hand, to the ranges. On the bull's-eye he sees written "Success." If he is a good marksman he hits it fair, but shooting high or low or to the side indicates some imperfection in his marksmanship.

We concede that there is reason in all things. Then why does this condition prevail? Underlying there is a dual combination — the "whatever it is" that draws the attention of the public to the ability of the dentist and the "whatever it is" in the administration of that ability that makes boosters out of those whose attention has been attracted.

The "whatever it is" is advertising. It shows a prospective customer that you have the goods he needs, and also that there are things about the way the goods are presented and the service is rendered that must be included in the advertising. There is one method of advertising that is generally considered to comprise the whole issue. It is the kind you see in the newspapers, handbills, cards, electric signs, etc. It points out exclusive methods, low prices, rapid service, etc., and is generally nauseating to the person who puts service first. Fortunately, though, there remains the other kind that deserves the name of "ethical advertising." It is ethical because it claims no unfair advantage over the other dentist, and because it depends upon service for compensation.

Let us return to the marksman. If he shoots under the mark, he has failed to advertise his wares ethically. Shooting to the side would indicate the incorporation of too much pleasure, laziness or intemperance into his work. Shooting over would denote the attempt to get a volume of business by any means whatsoever, and shooting diagonally

would show a combination of two of the conditions above mentioned. It is important to note that that dentist who has mastered ethical advertising has made a bull's-eye and is on the open road to success—the success he deserves—and he needs to avoid interruption, mental or physical, by financial, moral or physical conditions which would detract from his noblest capacity. This capacity for service he owes to himself, his family, the dental profession and humanity.

So much theory? Yes, but it works out in practice. Consider these features of dental practice. All a dentist has to sell is his time and his skill. To do business, he has to get the public into his office; and if he is a man of principle, he has to display something that will get repeat orders. How does he manage to get the public to come to see him? In this the public uses the matter of taste. It uses it in much the same way that it differentiates in music, beauty, and other things the world over. But for this difference of taste there would be only one man in a community who thought he had the best wife; likewise one dentist would do all the business! Fortunately for the man who succeeds, the majority of tastes run in certain channels, and the public selects the dentist who it believes measures up to the standard of that taste. If you would ask the first-timer why he came in, he would almost always give one of two reasons: either some booster told him to come or he had sized you up in your activities outside the office. Very, very few wander in for other reasons. In the sizing-up process he looks for those qualities which would inspire confidence in the ability and honesty of the dentist. If he has seen these qualities, it follows that in his method of life the dentist has ethically advertised himself.

When the first-timer comes in, he has also his idea of what he expects. In the waiting room his first thought is one of importance—he wants to be met in a cordial way, to have his dental problems discussed in a businesslike manner and, if necessary, to have an appointment made. It does not add to his idea of service to have to wait for a half-hour when he could be busy at his own work.

Next he is in the operating room in the chair for examination. His eye takes in the landscape. He is pleased to note the cleanliness, the tidy, businesslike appearance of the dentist, equipment and other details of the office. Then the diagnosis is made and explained to him. He is impressed by truth, and his confidence is made or shattered on that basis.

Now comes the plan of treatment. Some dentists assume it is their duty to use their own judgment and "fire ahead." That is poor business, and many a good patient has been lost by the failure to tell him all about the operation, even the cost of it. There are no "come-backs" when everything is on a businesslike basis. Many times it is impossible to make an exact estimate of the cost or fee, but in those

cases the patient is thankful for something approximate. It is worthy of note that those who can write articles entitled *My First Million* protest the most if they suspect an overcharge. Haven't you heard people complain that the finished work was not what they expected? Tell the patient in advance just what to expect and there will then be no necessity for the knocks that come from inadequate explanation of the operation, which magnify with age and retelling.

Things are now at a stage to go ahead with the work. Dentist and patient have an understanding of what is to be done. The patient is to expect certain work, the dentist a certain fee. Before leaving this, let me say that there are reasons sometimes why a certain plan of operation suggested by the dentist will be questioned. The most convincing argument the dentist can use is that in his advice he is following the golden rule.

At this time the patient needs and expects "handling." Not long after the child learns to talk, some kind soul puts "vs." in front of dentist, "versus" being the underlying thought when school children discuss him, an idea which continues through the years. Clever wits write essays on dentistry, and even the movies make a comedy on it. Almost every patient displays an inbred fear of dentistry.

Remember that the operating stage is the vital one for ethical advertising, the suggestions and impressions given to the patient being paramount in his idea of the size of the "D" on dentist. As a result of these, he is convinced of the class of dental service and decides whether he will come back and whether he will be a booster. The article he is paying for is dental service. If he is to be a satisfied customer, what does he want? He wants the dentist to know when and why there should be pain, to show he has minimized that pain and allayed his nervousness. He wants straight business backed by truth and honesty in advice and conduct. He wants useful information about the operation. He appreciates the features of the work which suggest extreme care, interest, thoughtfulness, self-control and common sense on the part of the dentist. His confidence is inspired according to his personal conclusions, and his power of advertising is based on those conclusions with the qualities of the finished product.

To the young man who meets immediate success these necessary qualities seem to be a natural gift. The other fellow has his light under a bushel, but mark you that by diligent study of the cause of his failure and correction of that cause he will meet with the public approval he deserves. Most of these qualities speak for themselves. The best suggestion I can give is that of truthful explanation all along the line. It creates and holds the interest of the patient, makes it easier for both patient and dentist during the operation, eradicates some features which tend toward failure of the operation, educates

the patient as to what is being done and why, and places him in a better position to form a good opinion, personally, with a good working knowledge of what he is talking about when an occasion should come to be a booster.

Did you ever hear your wife say she liked such-and-such a grocer? "He keeps good coffee and good butter." She speaks of things she knows. Likewise, speaking of what they know about dentistry, nine out of ten people discuss how the dentist extracts teeth. With education they would embrace the whole field of dentistry, and they respect and advertise the source of that education.

Let me repeat that if a dentist fails there is a cause. The cause can be ascertained by diligent study and can be corrected with the qualities that go to make up ethical advertising.



## Dental X-Ray Examinations\*

By Archie A. Albert, D.M.D., Pawtucket, R. I.

Before the employment of x-rays in the diagnosis of dental conditions practitioners of dentistry relied entirely upon their individual judgment and experience. Because of the innumerable potential sources of error when reliance is placed solely upon such factors, the introduction of dental radiographic examinations was really an inestimable blessing. Radiograms, by their accurate portrayal of the actual presence and extent of the various pathological conditions found in the oral cavity, minimize the possibilities of erroneous diagnosis. This facilitates the proper prognosis and treatment.

Raper cites a case where a young lady of about twenty was given an x-ray examination of her teeth and the following findings were made: one large cavity, two medium-sized cavities, two very small cavities, one filling failing at the cervical margin, and one filling with a large overhang encroaching on the interproximal tissues—seven findings in all. This same patient was examined by ten dentists by the ordinary methods, the mouth mirror and visually, with the following results: two dentists found two of the seven findings, six found only one, and two found none. This is 100% failure on the part of ten dentists to find all or a fair proportion of those found by the x-ray.

Inasmuch as so much reliance is placed upon the x-ray examination, it is needless to say that no diagnosis from radiograms is warranted unless the films are perfect and complete enough to include the actual pathology as well as to exclude possible errors of interpretation. Dentists are too prone to offer diagnoses based on faulty radiograms and snap judgment. The potential advantages of such a procedure are usually far outweighed by the potential disadvantages. Many a good tooth has been extracted upon the basis of faulty radiographic examination and interpretation.

The application of radiography to dentistry is widespread and in most cases absolutely necessary. This fact has not sufficiently impressed the members of our profession. A dentist nowadays is not doing justice to himself or to his patient unless he makes frequent use of the diagnostic possibilities offered by proper radiographic examination.

In mentioning some of the many instances where the x-ray examination should be made, I shall not endeavor to classify them in accordance with their frequency of occurrence, for this will vary with the particular field of practice in which the individual dentist is engaged. I shall

\* Read before the Rhode Island Stomatological Society.

try to cover some of the more common applications which readily suggest themselves:

*1. For purposes of general oral examinations.*

a. This applies particularly to investigation for septic dental foci as an etiological factor in the production of systemic diseases such as arthritis, neuritis, anemia, local diseases of the eye, etc., down an almost incalculable list of causes for human suffering. The application of dental radiography to this purpose alone is increasing daily with more justifiable bases.

b. To determine the presence and position of unerupted teeth and broken, retained root fragments.

c. To determine the exact location and extent of pericemental irritations and alveolar abscess formations. The necessity and value of such information cannot be disputed. If a patient presents himself with a mouthful of gold crowns placed over pulpless, "dead" teeth, who will venture to tell him positively, without an x-ray examination, which roots bear apical infection, which roots have incomplete root-canal dentistry, what the extent of pyorrheal destruction is, what the prognosis is, or what the most logical method of attack should be?

*2. As an aid in root-canal treatment.*

Personally, I know of no more valuable use of dental radiography than in root-canal work. A preliminary dental film will show the shape, size and approximate direction of the root, the number of canals in multi-rooted teeth, and the general pathological condition of the surrounding tissue. After the pulp has been removed, diagnostic wires can be inserted and sealed in place. An x-ray film will now aid in determining possible perforation through the side of the root, and also the extent to which the canal can be filled. After the canals are filled, another x-ray film will show whether or not the canal is properly filled. Subsequent x-ray films should be made after several months' interval to determine the extent of healing.

*3. In crown- and bridgework.*

Radiograms will show the condition of the roots of the teeth which are to bear the dental appliances. They will show also the condition of the surrounding alveolar abutments and the condition of the edentulous regions to be bridged over. They very frequently will disclose unerupted teeth or root tips.

*4. As an aid to the oral surgeon.*

In this particular field the x-ray examination should be considered as absolutely indispensable. It gives vital information

that is obtainable by no other methods, and it thereby avoids otherwise unforeseen difficulties.

a. In root resection, the operator is aided by a radiogram in determining the indication for resection. It will give him a fairly good idea of the field of operation and the amount of root to be resected. Subsequent radiograms will show the progress of healing.

b. In fracture cases, it determines the size and kind of fracture, the position of fragments and the amount of destruction.

c. In gunshot wounds, it will determine the amount of bony and dental injury, as well as help in the localizing and removal of the foreign body. It frequently is of tremendous value in the localizing of broken hypodermic needles and dental drills, thereby facilitating removal.

5. *In orthodontia*, dental radiography is being used continually:

a. To note the best time for extraction of deciduous teeth.

b. To note the movement of roots of teeth and their relationship to other roots and structures.

c. To note the presence or absence of unerupted permanent teeth before beginning treatment.

d. To note the status of development of unerupted teeth which are late in erupting.

e. To note the approximate size of unerupted teeth, for which space must be made in the arches.

f. To note the direction in which teeth are erupting and the relationship they will bear to the line of occlusion when erupted.

g. To note the position of third molars so that precautions may be taken to prevent impaction.

h. To note the condition of bone structure around non-vital teeth during orthodontic treatment.

i. To note the complete development of the roots of children's teeth.

The indications for the use of dental radiographic examinations as partially enumerated above give only the minimal suggestion of the possibilities for erroneous diagnosis on the part of an unwary operator. It might not be out of place, therefore, if I mention at this time some of the common pitfalls encountered by the inexperienced:

1. An overlapping projection of an antrum shadow is reported as an extensive periapical abscess.

2. The anterior palatine foramina and fossae may be projected over the upper incisor apices and be reported as periapical disease. This very often happens also in the case of the mental foramina, which may be projected over the bicuspid apices.

3. The inferior dental canals and the mylohyoid grooves are both often confused with pathological areas.

4. The nasal spine will sometimes obscure the central incisors. The zygoma shadow may be projected so as to obscure the molar roots. The coronoid process of the mandible may be projected into the upper third molar region and be mistaken for a third molar root where this molar has been previously extracted.

5. Excessive root distortion from faulty projection may give general misleading appearances.

6. The geniohyoid tubercle may be mistaken for a root.

Too many interpretations are made of uninterpretable films, and it is therefore not surprising that errors occur. It is up to the men of our profession to insist on adequate and proper interpretation and diagnosis for the welfare of our patients and for our own ease of mind. The disclosures of an x-ray examination should serve to raise the standard of our work. As dental practitioners, we must not be afraid to disclose and treat manifest pathological conditions, even though a proper x-ray examination reflects no credit upon our own previous efforts.

84 Broad Street.



## Togo's "Discussions"

*Mr. Editor of Magazine seeking to render Dentistry Digestible if Possible.*

*Hon. Sir:*

Month of September containing fade out of Summer Sentimentalities & Vacation Vacancies is now occurring with usual frequency. Considerable mental disturbances somewhat resembling thoughts are experienced at intervals of present owing to phenomena observed at this & other Seasons regarding condition apt to be overtaking despondent young man who has possibly purchased elaborate office equipment on basis of Hope & Promissory Notes superinduced by high-powered selling talk of Efficiency Expert who receives liberal cash commission for doing so whenever possible. State of affairs just enumerated necessarily shows more acute symptoms during recent years when amount of equipment required is extended to include everything from x-ray machines & dark rooms to newly painted girl introduced mainly for scenic effects during first years of watchful waiting.

Financial problems confronting young man of hopeful tendencies during first years of practice are becoming more severe if possible. Cash money required for education frequently exhausts coffers and coughing abilities of Hon. Papa who has frequently been known to cease doing so at some point during proceedings or immediately after graduation has occurred.

License to practice dentistry exclusive of expensive frame represents investment of several thousand \$\$, much study & anxiety, from 4 to 6 years of supposedly halcyon days of Youth & Beauty if present — yet it constitutes most completely frozen asset known to financial world until becoming thawed out with fires of growing practice & actual achievement.

How to accomplish such favorable results are problem of suitable size for Japanese & all other brains now focused on Progress of Dentistry & Human Welfare.

Peculiar situation now noticeable containing following ingredients:

1. Actual work turned out by students approaching graduation from any 1st Class Dental School consists of results usually superior in every way to actual work turned out by Hon. Average Dentist thruout supposedly free U.S.A. Yet some class of students proceeding under own power as independent practitioners experience remarkable difficulty in convincing Hon. Public regarding abilities to do so.

2. Reason for this fact may be absorbed from printed page with only slight effort—"Experience, Time & Co." have conducted for

centuries largest educational institution in entire world. All courses are of uniform price & up to present moment no short cuts through famous institution have been discovered. While students turned out are never of uniform ability & frequently resist improvement wherever possible, they have for centuries enjoyed excellent reputation for "safety" in respective fields.

3. Hon. Public therefore when experiencing dental disorders think somewhat naturally, "Doc Oldtimer is perhaps last Season's Model in matter of personal appearance but is possibly familiar with best detour around Hon. Pulp owing to fact of having driven same several times per day for last 27 years." "Doc Newboy just received one complete education on how to do it. But can he? Owing to fact of seldom having done so?" Foregoing phenomena seem to be integral part of natural order of mental process, therefore whenever possible young man should wear tight-fitting hatband & associate himself with established practitioner of considerable age & good reputation, on partnership based on sliding scale & containing ingredients of advancing percentage for junior brains as years go onward, thus avoiding pitfalls of overbuying in matter of equipment, overexpansion of credit, overmuch idleness & overdue notes at bank, & including possibly several other deleterious substances too numerous to mention.

Hoping you are the same,

Togo.



## The Dentist and Dentistry\*

By Harry Bear, D.D.S., Richmond, Virginia

Professor of Exodontia and of Dental Jurisprudence, Ethics and Economics, Medical College of Virginia.

The status of the practitioner in dentistry has changed with the passing of time. The general dentist is a practitioner in all phases of professional work which belong to the art. However, modern science, with all its diagnostic and prognostic complexities, demonstrates that it is not possible for one man adequately to fulfil the requirements of all these offices.

Years ago the total knowledge and application of dental practice were relatively within the capabilities of one man. The scope of dentistry being very limited, he was able to meet the demands of the times. The standard and quality of service formerly expected differed greatly from that which is demanded nowadays. Do we think for a moment that a patient would be pleased today with dentures made similar to those worn by George Washington? With our present conception of prosthetic dentistry we should expect not even the most modest patient to be satisfied with such results.

Today dental practice involves quite a number of branches incident to the service to be rendered the patient. As a branch of medicine, it has subdivided itself into many special subjects. This division in the medical art is old and may be traced back to the early Egyptians when there were "those practitioners for the eyes, those for the head, some for the teeth, others for the belly and for occult maladies." Some of the specialties in dentistry today are diagnosis, operative dentistry, oral surgery, exodontia, orthodontia, periodontia, pedodontia, ceramics, crown- and bridgework, partial dentures, full dentures and roentgenology. In each of these there are men who limit their practice to the particular branch. As a general practitioner, a dentist is expected to have a working knowledge of all these subjects and must employ and utilize what he does know about them in the treatment of his patients. Where treatment may be indicated for which the practitioner does not deem himself fully qualified, he will refer the patient to another as his good judgment and experience may dictate. Not only is this a matter of common practice, but the patients anticipate it as the occasion demands.

The dentist who limits his practice is expected to possess the highest degree of skill in the branch to which he devotes his time. The law also requires this. In accordance with this standard the obligations and liabilities of the specialist are therefore greater. In the perform-

\* Read before the annual meeting of the Piedmont Dental Society, Roanoke, Virginia, February 26, 1926.

ance of his service he often bears the responsibility of satisfying both the patient and the referring practitioner, not only in the quality of service rendered but in the manner in which the patient is handled.

The qualifications for the practice of dentistry have depended upon scholarship in the essential branches, while lacking somewhat what might be termed cultural requirements. In spite of this the dentist is expected to be the intellectual equal of the better people in his community. Educational standards have varied. They have become more exacting as the scope of the profession has broadened and its affiliation with medicine has become closer. For instance, compare the college entrance requirements of thirty years ago, when one could take up the study of dentistry with very little preliminary education, with those at present. Now one must have completed four years of high school work and one year of college work in liberal arts. We should feel gratified in knowing that the progress made has been for the greater part at the instigation of the members of our own profession.

The general practitioner bears a direct personal and professional relationship to his patient. He is the family consultant and adviser in matters pertaining to dentistry. It is different with the practitioner whose practice is limited to a special branch, for often he is consulted only for the specific treatment involved. The patient consults with the general practitioner and depends largely upon his advice in the case. The dentist realizes his responsibility of considering only the welfare of his patients and discharges his obligations in accordance with the highest dental ethics.

As a member of the dental profession, the dentist must uphold its traditions. As a professional man, his violation of civil and moral laws is of much greater seriousness than in the case of the average citizen, because more is expected of him. His personal conduct may reflect on the whole profession. His position in the community must depend upon his accepted ability and integrity, for he cannot indulge in ill-advised publicity. Our Code of Ethics justly prohibits public advertisements which seek to attract patients. Ours is a personal service which we have to offer, and we must not at any time betray the trust and confidence which the patient reposes in us.

It is of prime importance for a dentist to win the regard of his fellow practitioners. This is essential in early practice, for much is to be gained from the experience of others. The practitioner cannot overlook this fact because from others in his community he will learn, too, the attitude of the people toward dentistry. The layman is naturally limited in his knowledge of this profession, and it is our duty to evaluate this circumstance properly. The duty of the public toward a practitioner and the duty of the dentist toward the public are reciprocal, in which case each should respect the views and rights of the other.

Cultivate a personality which will win favor, never losing sight of the fact, however, of not doing this at the expense of professional ability. Be sincere. Concentrate your individuality—this gives you an opportunity of personal expression. How much the dentist needs this to offset in a way the unpleasantness of dental service *per se*! No one relishes our services, even though one sometimes says so when suffering excruciating pain. We should try, as best we know how, to ease the situation, but never to minimize that which may be of maximum importance.

The most important duty of the practitioner is to his patients. In this respect the fruits of his labors and the years of his experience are at their disposal. There are, nevertheless, other obligations. His attainments give him a superior knowledge of his particular field over the laity in his community. Communal welfare should be of some concern to him, and it is within his province to advise in matters pertaining to dentistry. While his time is of necessity very limited and valuable, he should contribute as much time and effort as he can. The dentist gains from outside contacts also, which broaden his point of view and incidentally increase the avenues for making acquaintances.

The debts and obligations of the practitioner call for much consideration. He should see that his own financial matters receive the prompt attention which they demand. It is expected that he be just as reliable in his business dealings as he is in the treatment of his patients.

Now, what are the compensations for the practitioner of dentistry? If this is to be answered solely in terms of money, then I fear we may be disappointed. For while there are glaring exceptions, the vast majority of dentists receive only an average recompense. If he but considers, as a part of his reward, the pleasant consciousness of his well-doing, then his pay is commensurate with his good work. An honorable position in a community is a privilege which is not bought with money. It is to be obtained by the earnest efforts of the practitioner imbued with the ideal that his calling is a lofty one.

If we analyze our efforts in behalf of good health, we find that dentistry is literally and altruistically devoted to professional suicide, for the public is constantly being advised regarding the means of preventive dentistry. This is a part of our contribution to human welfare. Take courage, however, for there is yet much to be done; there is a definite correlation of all the branches in dentistry. The general practitioner has an exemplary field of service, as also have those whose practices are limited to the numerous specialties which were outlined above. Justice demands of each practitioner that he do for the patient whatever he is able to do and also see that whatever else may be necessary in the treatment of the individual should be obtained. Remember

that this calls for the exercise of your best judgment and the application of extreme care and skill.

It must be realized that in considering the qualifications enumerated above we have only partially discussed the subject. There are many other attributes which tend to make for a successful dentist. He has often been prone to minimize these essentials which concern us in our daily practice. The minutest detail is of importance and the practitioner should ever be observant of these fundamental principles.

410 Professional Building.

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## How Digest Articles Find Their Way Around the World

THE DENTAL DIGEST for January, 1924, carried an article by Dr. Will S. Kelly of Wilkes-Barre, Pa., entitled *A Simple and Efficient Pyorrhea Treatment*. It described the use of Monsell's solution of iron, following the scaling and curetting. This article was read by Dr. Fritz Dorsch of Munich, Bavaria.

In the *Deutsche Zahnarzt Rundschau* for April, 1925, appeared the questions, "Who knows Monsell's solution?" "How is it composed?"

Dr. Dorsch wrote the magazine as follows: "The English Dispensary in Munich furnishes it to me according to the U. S. Dispensary. Please let me know if you read Dr. Kelly's article in THE DENTAL DIGEST for January, 1924."

Not long thereafter Dr. Dorsch received a reply from Sweden of which the following is a translation:

"My dear colleague:

Please accept my thanks for your kind letter of April 17th, in reply to my inquiry in the question box of the 'Z. R.' in reference to Monsell's Iron Solution. Subsequently I read in the *Austrian Journal for Stomatologie* a short reference to the article by Dr. Kelly (THE DENTAL DIGEST). I should very much like to try the preparation, but as it is impossible for a private person to import medicines into Sweden, I should greatly appreciate if I could get the prescription, especially as it runs counter to a doctor's feeling to use a remedy of unknown composition.

"With a German handclasp and greetings, I remain,

Very truly yours,

DR. I. WEIDMYER."

## The Latest Developments of the Articulation Problem\*†

By Wilhelm Balters

Fehr wrote in 1922: "If we compare dental research work with a battle for position on a wide front, we might say that for several years an offensive has been on at the front sector of the articulation problem, that it has gained some ground and it is hoped will gain still more, for the offensive is not yet over." Two years of this contest have since passed and it is interesting to note what "ground" has been won during this period. To the throng of articulators others have been added. At the same time the ideas which are incorporated in the models and the attempts to solve the problem have led to a simplified consideration of the partial problems, which have brought us nearer to a practical solution. Indeed, they have led inevitably to a reconstruction of those articulators which are known as simple wire articulators. How this came about we shall consider in the following chapters.

In the construction of articulators Bonwill, Gysi, Snow, Christensen, Schröder and many others begin with the idea that an articulating machine must necessarily contain two devices similar to the natural joints and their movement possibilities and a fixation of the height of the bite, once that has been determined, the latter in the form of a supporting pin or supporting screw. These hinge-joint articulators, therefore, represent an imitation of the natural conditions. They are intended to accommodate themselves to the individuality of each case with the aid of the most varied construction and mechanisms for the registration of the inclinations of the condyle path and condyle movements. They presuppose the registration of the condyle path and the condyle movements which are to be transferred to the articulator. This is done by the direct method in the following manner:

The movements of one bow, which is attached to a lower model and extends with both ends to the region of the condyles, are registered outside the mouth with the help of copying points on two pieces of cardboard applied close to the face, the ends of the bow moving with the movements of the lower jaw. Indirectly the determination may be accomplished by registering, by means of a wax bite inside the mouth, the relation of the joints to each other in occlusion and protrusion or in occlusion and lateral movements. The transfer to the articulator is accomplished, with the direct measurements, by embedding the lower

\* From the Postgraduate Course of the Dental Institute of the University of Bonn.

† Translation from *Zahnärztliche Rundschau*, Berlin, Germany, January, 1925.

impression in accordance with the distance of the two rows of teeth from the condyles and then allowing the condyle paths to take the inclinations which the measurements had indicated; and with the indirect measurements, by seating the jaws first in the occlusal position, regardless of the distance of the condyles, and then bringing them with the aid of a bite-cardboard to the protrusion position, when the condyles will place themselves automatically.

This attempt at solving the problem has been criticized on the ground that errors may easily slip in while the measurements are being taken, owing to the mobility of the tissues or lack of care, or by not proving them up, and another path has been followed, the principal partisans of which are Eichentopf and Fehr.

Eichentopf reasons thus: The extra-oral registration of the condyle movements is made by drawing it on a plane. It is therefore only a projection of the actual movements. The intra-oral method takes into consideration only one position at a time of the many possible movements. If we would proceed correctly, we must register and fix *in space* all the individual movements. This may be brought about by allowing the movements of the jaw to engrave themselves in the wax (patterns) by means of registering devices and, extra-orally, utilizing these movement-curves taken inside the mouth, by transferring them to a plastic mass. This transfer must be made in at least three points simultaneously, analogous with the number of supports of the hinge-joint articulators (one each at the condyles and one in the incisor region), the arrangement of these points, however, being arbitrary. The movements of the upper and lower parts of these articulators made in accordance with these transfers are the movements which were registered individually. Since the arrangement of the positions of the guides is immaterial, Eichentopf even breaks with the heretofore customary placing of the supporting pin, actually reversing it by having two supporting points in the incisor region and one between the condyles. (It may be remarked that, however interesting is the possibility for the arbitrary arrangement of the supporting points in the jointless movement machines, in practice it has proved an obstacle when mounting the denture.)

The question now arises as to how far we have progressed in the solution of the problem by the methods mentioned, and how the solution is to be obtained at all. For a proper answer we must go back farther if we want to describe the many articulators critically, even if we divide them into classes.

The articulation problem, that is to say, the question as to what position the teeth of the upper and lower jaws must take, and how the occlusal surfaces should be shaped so that they may be always in contact during the movements of the jaws in all positions, arose when the

attempt was made to make a full denture for an edentulous mouth. It was only after the solution of the many partial problems that a science was formed which we call the "science of articulation." The starting point for the research was the analysis of the condyle and the condyle movements. Fortunately, or unfortunately, in the beginning there was the idea that the condyle head travels a fixed path during its movements in the joint similar to a train on rails—"fortunately," for had the attempts in this direction proceeded differently it would have been found that there are no such paths of the condyle, the problem would not have been so thoroughly penetrated in all phases and we would not now possess the valuable research results of a Gysi, for instance; "unfortunately," for then the handling of the problem would have been easier, many expensive articulators would not have been built to try the patience of practitioners, the repugnance at having to deal with the often abstract articulation problem would not have arisen and the science of articulation would undoubtedly have long been the common property of all practitioners. Of course, the idea of the forced condyle movements or guidance of the jaws through the condyles was not to be rejected summarily. Its correctness or falsity had first to be proved by measurements. But because they were taken on individuals with their natural teeth, these measurements presented an arrangement which must guarantee correctness. For a long time the experiments were not disputed, and yet today the results give cause for many controversies.

What about individual movements? We can answer this question and confirm it by an experiment to the effect that in the edentulous jaw, within the realm of articulation of artificial teeth, that is to say, as to what extent the teeth would retain contact during the movements of the jaw, *there are no unequivocally definite individual movement-paths in the condyle.* Individual, rhythmically repeated movements of the condyles are found only in jaws having their natural teeth, where the teeth through their form and position regulate the direction and extent of the movements of the jaws. In other words, the condyle guidance is a passive one. Because this had been overlooked, the construction of articulators had to proceed in such a way that models were designed which made it possible to reproduce movements of the articulator parts which were determined by the condyles. The error was in the reproduction of the condyle movements, and for that reason it was not realized that the registration of definite movements in an edentulous jaw for the construction of a *total* restoration is impossible, and that paths so registered must needs be products of chance, which, moreover, depend on the (not individual) height and shape of the patterns and inserted measuring devices.

As far as the movements of the condyles in the articulation field

are concerned, they are omnilateral. The fields in which they take place are inclined, in the case of a jaw having its natural teeth, because in jaws with teeth the condyle head lies against the discus in front of the condyle protuberance. In the edentulous jaw, however, the fields of movement in the region of the articulation of artificial teeth are practically horizontal, because the condyle lies in the glenoid fossa.

This inclination of the fields is of importance, inasmuch as the depression of the lower molars during articulating movements of the jaw, in addition to the overbite of the incisors, also depends on the inclination of these fields, and the depression is the greater the steeper the fields, and the less, the flatter they are. Non-observance of this might cause a gaping of the lateral teeth.

Whether the inclination is of the same practical importance for partial dentures as has been claimed for it for full dentures is another question, for we must not lose sight of the necessity there is of adding to this depression, due to the overcoming of the condyle inclination, the generally larger depression for overcoming the steep overbite of the incisors, which also separate the molars. If, for instance, the depression caused by the high incisor overbite or high canine cusps is to be compensated in the protrusion of the jaw, the molar cusps also must be formed high, which, however, often is not the case in the natural denture (where there is only a small natural width of molars as compared with the bicuspids). In such cases, if no compensation is provided by setting the molars obliquely, our efforts with partial dentures, crowns or bridges in the molar region, to compensate the depression caused by the incisors through the high shaping of the cusps, will fail, owing to the natural shape of the neighboring and opposite cusps. (Condyle measurements here are absolutely useless, because the results of these measurements cannot be taken into consideration. This, however, does not mean that an articulator condyle guide is not suitable for this kind of work.)

In the edentulous jaw the depression in the molar regions caused by the depression of the condyles is so small (as may be arithmetically proved) that such a measurement practically cannot be obtained, owing to the shifting of the plates and the yielding of the tissues.

Recognizing as we do that measurements of the inclination are superfluous, the question naturally suggests itself as to whether all measurements are unnecessary and all measures superfluous. By no means! That would be misunderstanding the conditions. Yes, it would be absolutely wrong now to demand a return to the popular hinged articulator. That is easily proved by considering the following:

The depression caused by the overbite during protruding movements depends for each individual tooth in the set on its distance from the condyle. By arranging the jaws at the natural distance from the

opening axis (axis through the condyles) we get the measurements for the cusp formation of each individual tooth. From this it follows that the distance of the jaws from the condyles must assuredly be taken into consideration, for it is this orientation of the jaws which makes possible the compensation of the depression of the jaw in the molar region during protrusion and the lateral movements caused by the incisor overbite in full dentures, because the relations of the cusp elevations are solely determined by it. This orientation gives us at the same time also the explanation as to why in partial dentures a compensation is frequently impossible on account of local conditions.

Let us now consider briefly the lateral movements of the jaws. It has already been remarked before that the condyle movement is omnilateral and that its individuality is determined by the form and position of the teeth. This may readily be explained in the following manner:



Fig. 1

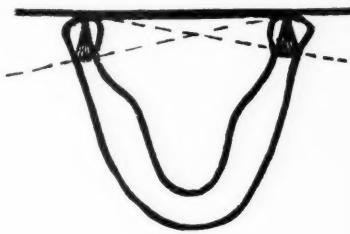


Fig. 2

In cases of absorption (Fig. 1) the condyles lie along the dorsal walls when the jaws are in occlusion. The lateral movements are executed about the points of contact, the condyle distances representing the radii. From each point of the path of the swinging condyle the jaw may also execute a rotary movement with the previously resting condyle, whereby the condyle path becomes a condyle field (Fig. 2, black triangle). If now the bite is raised, the condyle advances (as represented in exaggeration in Fig. 3). Thus one condyle, during lateral movements, may slide backward while the other swings forward (Fig. 4). The field of movement for the condyle is thus represented by an open angle (Fig. 5), on the bisecting line of which the condyle advances the farther the more the bite is raised, and from the points of which omnilateral movements in various depths are possible. As to the radii of the movements, they may naturally be the smaller the farther the condyle advances. In the cases which are of practical importance for us the radii which we will have to consider will certainly be smaller than the distance between the condyles. The centers for these movements will accordingly lie before or behind the condyle axis and,



Fig. 3

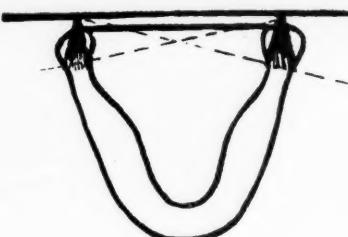


Fig. 4

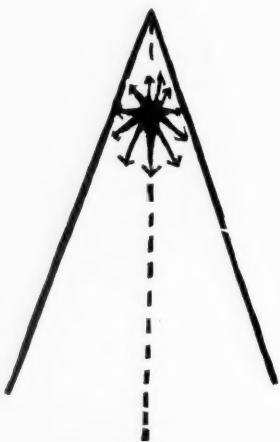


Fig. 5

of course, always within the condyle width. From this it follows that articulators with joints that have condyle distance and are intended to imitate actual conditions must have devices in their condyles which make it possible for the jaws to rotate about rotation points which are located as described. How this is accomplished is immaterial, whether through adjustable rotation points or folding up of the condyles or through omnilateral condyles. It is obvious, however, that the free articulator condyle must be given preference, and this will be the more readily understood if we again think of the passive condyle guide.

The lateral movements of jaws with teeth depend on the formation of the arch of the upper incisors. According as this arch is narrow or wide, the jaw may move to either side more or less. Where the arch is narrow, the jaw must open in order to make a lateral movement, the necessity therefore decreasing as the arch becomes wider. The edentulous jaw does not require any opening for the lateral movements because of the absence of the guiding incisors. This opening

reappears only when providing an incisor and cuspid overbite in the artificial denture. (We are careful to do without the cuspid overbite because the loose pieces would otherwise be chiseled off.)

From the foregoing it is evident that in the construction of a full denture a device which allows a hinge-joint movement becomes necessary, to the hinge of which the jaws may be orientated in determined distances and which must move horizontally in all directions. A similar device is necessary for partial cases, in which, however, the omnilateral movements must be possible not only in an horizontal plane but eventually also obliquely.

After this train of thought and considering the previous solutions of the problem, if we divide articulators according to their functions into several classes without stopping to consider models which follow the middle of the road, or which in their construction lay particular stress on such details, as the physiological opening movement, the opening of the lower bow with immovable upper bow, etc., we may group them as follows:

1. Anatomical articulators with adjustable condyle path inclinations and fixed articulator distances.
2. Anatomical articulators with adjustable condyle path inclinations and adjustable articulator distances.
3. Anatomical articulators with adjustable condyle path inclinations and adjustable condyle path distances and adjustable or adjusted articulator condyles.
4. Non-joint articulators with three-point guide.
5. Anatomical articulators with adjustable condyle path but otherwise free joint.

*(To be continued)*



# DENTAL LAWS

## Summary of Dental License Requirements Throughout the World

By Alphonso Irwin, D.D.S., Camden, N. J.

### SOUTHWEST AFRICA

Native Africans do not furnish a promising field for the operations of alien dentists. The country, however, is open to the missionary doctor under the sanction of the local authorities. This territory is a Union of South Africa Mandate, and comes under the British Colonial Regulations as administered by the Union.

### SOUTH CAROLINA

Board of Dental Examiners: Webb Thompson, President, Spartanburg; W. K. Walker, Orangeburg; Frank Ferguson, Greenville; H. B. Hair, Columbia; W. B. Simmons, Secretary-Treasurer, Greenville, South Carolina.

The Dental Laws are dated 1879, 1902, 1911, 1912, 1915, 1922.

The English language, dental supervision, examination, and registration are required. The State Board of Dental Examiners meets in June, at Columbia, S. C. The examination fee is \$25.00. "Reciprocal relations with Georgia only." The attention of applicants for license to practise dentistry in the State of South Carolina is respectfully called to the following rules and regulations:

I. All applications must be in the hands of the Secretary ten (10) days before the meeting of the State Board of Dental Examiners.

II. The minimum preliminary educational requirement is a State High School or its equivalent, fourteen (14) units, a certificate of which must be filed with the application.

III. Each application must be recommended by three ethical dentists from the applicant's home town or nearest towns.

IV. Each application must be accompanied by a photograph of the applicant, on the back of which (photograph) must appear the signatures of the three dentists who recommend the applicant.

V. Each application must be accompanied by a fee of \$25.00.

VI. Each applicant must present a diploma from a reputable dental college at the meeting of Board.

VII. The practical work in Operative Dentistry will consist of one goldfoil filling, one silicate filling, and one amalgam filling. Applicants must furnish instruments and material.

VIII. The practical work in Prosthetic Dentistry will consist of full upper and lower sets of vulcanite teeth articulated in wax. Applicants must furnish full upper and lower models on an anatomical articulator; also teeth and wax. The work to be done in the presence of the Board.

IX. The practical work in Crown and Bridge will consist of one shell crown and one porcelain-faced crown. Applicants must furnish articulated model, material and instruments.

X. Students who have finished the Junior year in college, may take the written examination on all branches which they have completed, provided they comply with rules one to five inclusive.

XI. The theoretical examination will consist of written examination on all regular college branches.

XII. Applicants may do their practical work prior to June 22, in the office of any member of the Board. A definite engagement must be made with the Board member.

The next meeting of the State Board of Dental Examiners will be held at Jefferson Hotel, Columbia, S. C.

W. B. SIMMONS, Secretary-Treasurer,  
Professional Building, 107 East North St.,  
Greenville, South Carolina.

#### EXAMINATIONS

Law approved March 1, 1922

Sec. 7. Application for License to Practise Dentistry, and Examination: All persons not heretofore legally licensed to practise dentistry in this State, who desire to be licensed to practise dentistry in the State of South Carolina, shall make a written application for examination to the Secretary of the Board, and accompany same with the sum of twenty-five (\$25.00) dollars, which is hereby fixed as the fee for examination and license. All applicants must be twenty-one years of age, of good moral character and reputation, and they shall submit such proof as the Board may require as to character and fitness. If the Board shall become convinced that an applicant is of such moral character that they believe the applicant cannot be trusted to conduct an honorable or an honest practice in the State, they shall have the

right to decline to allow the applicant to take the prescribed examination, or may have the right to decline to issue a license regardless of other qualifications applicant may possess. All applicants must have been graduated from some reputable dental college, meaning such dental college or school whose standard of curricula and equipment are within the limits prescribed by the American Association of Dental Faculties, and must have received the degree of Doctor of Dental Surgery or its equivalent therefrom. All applicants shall be required to show evidence of preliminary education by certificate or otherwise that will be the equivalent of a graduate's certificate from a high school in South Carolina. All applicants shall present to the Board evidence of their proper identification. If the Board shall determine that the applicant is qualified to take the examination required for license, it shall notify the applicant of the time and place to report before it for examination. The Board shall require applicants to practise dentistry to pass an oral or a written examination on all branches contained in the curricula of standard dental colleges, and shall also require them to perform such practical operations in the mouth or on artificial mechanical appliances as shall be assigned them. If the applicant shall make the grade required by the Board, it shall issue to him or her, without further initial cost, a license to practise dentistry within the State. All licenses shall be numbered and issued consecutively. If the Board, after considering an application and its accompanying qualification records, shall determine that the applicant is not qualified to take the examination, it shall be the duty of the Board to return to the applicant the fee of twenty-five (\$25.00) dollars. Every license issued shall state on its face that it shall be void if not recorded within ninety (90) days after the date of its issuance, as hereinafter provided in this act.

Sec. 8. Dental Hygienists: The Board of Examiners may issue a license to any woman who has the necessary qualifications as hereinafter described, to act as assistant to any regularly licensed dentist, either in his or her office or under his or her direct supervision; in any public school, clinic, penal or charitable institution; to be known as a dental hygienist, and such dental hygienists shall have the right to remove calcareous deposits, accretions, and stains from the exposed surfaces of the teeth and directly beneath the free margins of the gums, and shall polish to smoothness any over-hanging margins or fillings or unevenness of the surface of the enamel for the prevention of cavities at such places on the exposed surfaces of the teeth, but shall not perform any other operations on the teeth, mouth or any diseased tissues of the mouth; but nothing in this Act shall be construed as authorizing a dental hygienist to perform any operation except under the supervision of a licensed dentist. It shall be unlawful for them to perform

any dental operation, and it shall be unlawful for any licensed dentist to permit a dental hygienist to perform any dental operation, other than as described, while in his or her employ or under his or her supervision. It shall be the duty of the Board of Examiners to revoke the license of any dental hygienist who shall perform any dental operation other than that authorized by this section, and it shall also be the duty of the Board to revoke the license of any dentist who permits a dental hygienist to perform any dental operation not authorized by this statute while in his employ, or under his direction, and either or both of them shall be deemed guilty of a misdemeanor for the violation of this section, and subject to a fine of not less than twenty-five (\$25.00) dollars nor more than one hundred (\$100.00) dollars, or shall be imprisoned for a term of not less than thirty days nor more than three months.

A dental hygienist to obtain license must have had at least two years in some high school of South Carolina, or its equivalent, must have spent at least six months in some school for the instruction of dental hygienists that has been approved by the Board, and shall be of good moral character. Applications for the practise of dental hygiene in South Carolina must be made to the Board of Examiners in the same manner as that prescribed by Section 7 of this Act for applicants to practise dentistry, except that the fee accompanying the application shall be fifteen (\$15.00) dollars. Dental hygienists shall be subject to the same penalties for fraud, malpractice or immoral conduct as that prescribed by this Act for licensed dentists. The Board of Examiners shall make such rules and regulations as may be necessary for the examination of dental hygienists, and shall issue a certificate to the applicant therefor, who shall furnish proof satisfactory to the Board of her qualifications. The licenses thus issued to dental hygienists shall be subject to the same rules, regulations and limitations, fees and penalties as to being recorded and annually renewed as those prescribed by this Act for licenses to practise dentistry.

#### RECIPROCITY

Sec. 14. Any dentist or dental hygienist who desires to practise in this State and had been practising his or her profession continuously for five years or more, next preceding the date of the application hereinafter referred to, under license lawfully issued by some other State or Territory or the District of Columbia, where the standard of proficiency equals that maintained in this State, may file with the South Carolina State Board of Dental Examiners his application for license to practise in this State without undergoing the examination for license provided for in Section 7 of this Act. The application shall be accompanied with a fee of twenty-five (\$25.00) dollars, the original or a

certified copy of the original license under which he or she has been practising, a certificate from the Board which issued said license setting forth the applicant's reputation for honesty, morality and professional ability, and such other information or data as the Board may deem expedient or necessary. Upon satisfactory proof of the applicant's fitness and ability being furnished, the Board may, in its discretion, issue a license to practise to the applicant without further cost. If the same courtesy or privilege is not authorized by law of the said State, Territory or the District of Columbia, in which said applicant has been practising, so as to permit similarly qualified dentists or dental hygienists of this State to be licensed therein, then the Board shall refuse to issue a license under this Section, regardless of the applicant's fitness or qualification. Should the Board refuse to issue a license under this Section, or should the applicant not be entitled to license because of non-reciprocal relations between his or her State, Territory or the District of Columbia, and this State, then five (\$5.00) dollars of the applicant's fee shall be refunded by the Board to the applicant.

Sec. 15. Certificate of Recommendation to Licensee Desiring to Leave State to Practise in Another State: Any dentist or dental hygienist who desires to move from this State and practise his or her profession elsewhere, may, if he or she has been legally licensed and practising continuously for five years next preceding the date he or she expects to leave this State, file with the Board a written application advising of the intention to leave this State and requesting a certificate of practice. The application shall be accompanied with the sum of fifteen (\$15.00) dollars, which is hereby fixed as a fee for acting on said application. If the Board shall determine that the applicant is of good moral character, and that he or she is proficient in his or her profession, and has been continuously engaged in the practice for the then next preceding five years, it will thereupon issue and deliver to the applicant its certificate of practice, signed by the President and Secretary, and therein certify the number of years of practice in this State, and the fact that it deems the applicant to be of good moral character and proficient in the profession. All such certificates of practice shall be alike in tenor and form, and, upon the refusal of the Board of any other State, Territory or the District of Columbia to fully honor such certificates, the privilege and courtesy provided for in Section 14 of this Act shall be deemed forfeited by such State, Territory or the District of Columbia.

#### SOUTH DAKOTA

Board of Dental Examiners: L. R. Walston, President, Redfield, S. D.; B. F. Lockwood, Vice-President, Yankton, S. D.; G. G. Kimball,

Secretary-Treasurer, Mitchell, S. D.; G. O. Goodman, Milbank, S. D.; G. R. Lanning, South Sioux Falls, S. D.

The Dental Laws were passed in 1885, 1889, 1901, 1909, 1921 amendment.

The English language, dental supervision, examination and registration are required. January and July examinations are usually held at Sioux Falls, South Dakota, examination fee \$25.00. South Dakota does not interchange dental licenses with any state. Section 11 of the amended 1921 law contains reciprocity provisions. If candidate is successful in passing the required tests the registration certificate is ten (\$10.00) dollars. Annual registration by July 1st with the Secretary of the Board, fee two (\$2.00) dollars.

#### BOARD RULES

1. Candidates for examination shall be required to furnish to the Secretary of the Board an exact copy of diploma from a reputable dental college to which he has made affidavit that it is a true and correct copy of the original and that he is the rightful owner of the same. Also present diploma for examination to Secretary of the Board. Candidates are required to have a late photograph pasted on application blank. All candidates will be examined in the following subjects: (1) operative dentistry; (2) prosthetic dentistry and orthodontia; (3) anatomy; (4) physiology; (5) histology; (6) bacteriology and pathology; (7) materia medica; (8) oral surgery; (9) chemistry and metallurgy; (10) anesthetics; (11) clinical operative dentistry; (12) clinical prosthetic dentistry; (13) oral hygiene; (14) x-ray, and all the candidates must bring dental engine, operating instruments, filling materials and such appliances and materials as are necessary to do any clinical work.

2. All candidates for licenses will be required to do practical work in clinical, operative and prosthetic dentistry.

3. All candidates for examination will be required to articulate full upper and lower dentures and furnish models for same.

4. All applications for examination must be in the hands of the Secretary of the Board, together with the fee of twenty-five (\$25.00) dollars at least one week prior to examination, and no candidate will be admitted to examination who has not fulfilled the above requirements. In no case will the fee be returned. When an applicant passes a successful examination the fee for certificate of registration is ten (\$10.00) dollars.

5. A final average of seventy-five per cent of correct answers to the full quota of questions used will be required to entitle an applicant to a permanent license; provided, that the applicant does not fall

below seventy-five per cent in theoretic, operative and prosthetic dentistry.

6. The Board reserves the right to pass upon the reputability of any dental college.

7. An applicant having failed to pass, who presents himself for re-examination, will not be given credit for any work either theoretical or practical, done at a previous examination.

8. Every person licensed to practise dentistry in South Dakota must procure from the Secretary of the Board of Dental Examiners, on or before the first day of July of each year, a certificate of registration and pay an annual registration fee. And any dentist in the state who does not procure this certificate of registration is guilty of misdemeanor and is punishable by a fine not to exceed one hundred (\$100.00) dollars or by imprisonment in the county jail not to exceed thirty days, or both. Section 4, Session Laws of 1909, Chapter 4.

9. Reiterates above requirements, and includes dentists who hold a South Dakota license but are practising in other states.

10. South Dakota has no reciprocity with other states, therefore a full examination in all subjects before the Board is necessary in order to procure a license.

G. G. KIMBALL, Secretary-Treasurer,  
Mitchell, South Dakota.

Verified April 16th, 1926.

**SOUTH DAKOTA DENTAL LAWS AS ENACTED BY THE LEGISLATURE  
DURING 1909 SESSION, OPERATIVE IN 1926**

Be It Enacted by the Legislature of the State of South Dakota:

1. (Who May Practise—License.) It shall not be lawful for any person to practise dentistry in this State without having a license so to do from the Board of Dental Examiners.

2. (Board of Dental Examiners—Appointment.) The Board of Dental Examiners shall consist of five practising dentists of the State, appointed by the Governor, each for the term of five years and until his successor qualifies, and no member shall serve more than two successive terms. The Board at all times shall include three members who shall have been appointed from a list of candidates recommended by the South Dakota Dental Society, if such recommendation be made at least ninety days before the term of a member of that class expires; otherwise the governor may appoint without such recommendation. Every vacancy caused otherwise than by the expiration of a term shall be filled in the same manner and from the class to which the retiring member belonged; provided, that in such case it shall be sufficient to

present a list of candidates by such dental society within thirty days after such vacancy occurs.

The recommendations for membership on the Board of Dental Examiners shall only be made at the regular annual meeting of the South Dakota State Dental Society, and such society shall recommend not less than two candidates for each position to be filled.

3. (Power to Make Rules—Officers—Records.) The Board of Dental Examiners shall have power to make reasonable rules and regulations for carrying into effect the provisions of this Act. It shall choose one of its members president and one secretary thereof, and shall hold regular meetings twice in each year, and such special meetings as the Board may by its rules provide. A majority of the members of the Board shall constitute a quorum for the transaction of business, but a less number may adjourn from time to time. The Board shall keep full and complete minutes of its proceedings and of its receipts and disbursements and a full and accurate list of all persons licensed and registered by it, and such records, together with the list of licensed and registered dentists, shall be public records and shall at all reasonable times be open to public inspection. Such records, or a transcript of the same, or any part thereof, or a certificate of the secretary stating that any person is or is not a legally licensed or registered dentist, under the seal of the Board, certified by the secretary thereof, shall be *prima facie* evidence in all courts of the State of South Dakota of the facts therein stated without further authentication. The president and secretary of the Board shall have authority to administer oaths, and the Board shall have power to hear testimony as to all matters relating to the duties imposed upon it by law. If any member of the Board shall, without cause, absent himself from two of its regular meetings consecutively, his office shall be deemed vacant, and such vacancy shall be filled by appointment as hereinbefore provided; provided, that an opportunity, upon due notice, shall be given such delinquent member before he shall be removed from office, for a hearing upon charges made.

4. (Certificate of Registration—Fee.) It shall be the duty of each person licensed by the Board to practise dentistry in this State to procure from the secretary of the Board, on or before July first, annually, a certificate of registration. Such certificate shall be issued by the secretary upon the payment of a fee to be fixed by the Board, not exceeding the sum of two (\$2.00) dollars. All certificates so issued shall be *prima facie* evidence of the right of the holder to practise dentistry in this State, during the time for which they were issued. Any certificate or license granted by the Board may be revoked by it upon conviction of the party holding it of a violation of any of the

provisions of this Act. Every person receiving such certificate shall conspicuously expose the same in his place of business.

5. (Examination—License—Revocation—Assumed Name.) A person not already a registered dentist in this State, desiring to practise dentistry therein, shall apply to the secretary of the Board for examination, and pay a fee of twenty-five (\$25.00) dollars, which in no case shall be refunded. At the next regular meeting he shall present himself for examination and produce his diploma from some dental college of good standing, of which standing the Board shall be the judges, or furnish to the Board satisfactory evidence that he has been engaged in the active practice of dentistry for at least five years immediately preceding such examination. The Board shall give the applicant such an elementary examination as to thoroughly test his fitness for the practice and include therein the subjects of anatomy, physiology, chemistry, *materia medica*, therapeutics, metallurgy, histology, pathology, and operative, surgical and mechanical dentistry; and the applicant shall be required to demonstrate his skill in operative and mechanical dentistry. If the applicant successfully passes the examination, he shall be registered by the Board as a licensed dentist, and supplied with a certificate of registration signed by all the members of the Board of Dental Examiners.

6. (Dentistry Defined—Inhibition—Exception.) Any person shall be said to be practising dentistry within the meaning of this Act, who shall hold himself out before the public as practising dentistry by equipping an office, advertising or permitting it to be done by sign, card, circular, handbill, newspaper or otherwise, that he can or will attempt to perform dental operations of any kind, treat diseases or lesions of the human jaw, or replace lost teeth by artificial ones, or attempt to correct malposition thereof, or who shall for a fee, salary or other reward, paid or to be paid, either to himself or to another person, perform dental operations of any kind, treat diseases or lesions of the human jaw or teeth, or replace lost teeth by artificial ones, or attempt to correct malposition thereof. The foregoing provisions of this section shall not apply to students enrolled in and regularly attending any dental college, who perform acts of dentistry in the pursuit of clinical advantages under the direct supervision of a preceptor or a licensed dentist, during the period of their enrollment; and the provisions of this Act shall not prevent any legally licensed resident physician or surgeon from extracting teeth or to prevent any person from using any domestic remedy for relief of pain.

7. (Officers' Meeting—Compensation—Report.) Out of the funds received by the Board each member may be paid the sum of five (\$5.00) dollars for each day actually engaged in the duties of his office and all legitimate and necessary expenses incurred in attending

the meetings of said Board. Such expenses shall be paid from the fees received by the Board under the provisions of this Act, and no part of the salary or other expenses of the Board, excepting the printing of the annual report, shall be paid out of the State treasury. All moneys remaining after the payment of such per diem allowance and other legitimate and necessary expenses as above provided for, shall be held by the secretary as a special fund for defraying the expenses of the Board in carrying out the provisions of this Act. The secretary shall give a bond in such a sum and with such conditions as the Board may from time to time direct. The Board shall make an annual report of its proceedings to the governor on or before the fifteenth day of November of each year, which report shall contain an account of all moneys received and disbursed by the Board during the preceding year.

8. (Penalty for Violation of this Act.) Any person violating any of the provisions of this Act is guilty of a misdemeanor and upon conviction, for the first offense, shall be punished by a fine not to exceed one hundred (\$100.00) dollars, or not less than fifty (\$50.00) dollars, or by imprisonment in the county jail not to exceed thirty days, or by both fine and imprisonment. For the second offense, the punishment shall be a fine of three hundred (\$300.00) dollars and thirty days imprisonment in the county jail. For the third offense, the punishment shall be a fine of five hundred (\$500.00) dollars and ninety days in the county jail.

9. (Penalty for False Pretense.) Any person who shall knowingly or falsely claim or pretend to have or hold a certificate of registration, diploma or decree granted by a society or by the Board of Dental Examiners, or who shall falsely or with intent to deceive the public, claim or pretend to be a graduate from any dental college, not being such graduate, is guilty of a misdemeanor, and upon conviction is punishable as provided in Section 8 of this Act.

10. (Penalty for Practising Under False Name, Etc.) Any person who shall be licensed under the provisions of this article, and who shall practise dentistry under a false name with intent to deceive, shall be liable to have his license revoked upon twenty days' notice of such proposed revocation and of the time and place of considering such revocation by the State Board of Dental Examiners. Any person who after the revocation of his license, continues to practise dentistry in this State is guilty of a misdemeanor and upon conviction thereof is punishable as provided in Section 8 of this Act.

11. (Repeal.) Sections 285 to 296 inclusive, contained in Article 10 of the Revised Political Code of 1903, together with all acts amendatory thereto and all acts and parts of acts conflicting with the provisions of this Act, are hereby repealed.

Approved, February 3, 1909. Amendment 1921.

## DENTAL ECONOMICS

### The Worthless Promise

By M. L. Hayward, Hartland, N. B., Canada

"I couldn't pay cash right now, if I was to be hanged for it, but I'll endorse over Henry Smith's note for \$100 in my favor," the customer suggested, and the dentist asked the standard question.

"Is Smith good for it?"

"Good as gold," was the positive reply. "Owns his house and hasn't got the scratch of a pen against a thing."

"Endorse your note, then."

"Of course, I want you to agree not to come back on me, but to look to Smith when the note falls due," the customer urged.

"Yes, I'll agree to that," the dentist concurred.

The note fell due, the dentist ascertained that Smith wasn't worth suing—and entered suit against the customer as endorser of the note.

When the case came to trial, the customer went into the witness box and started in to tell of the agreement between the dentist and himself in reference to the note.

"I object, your Honor. The written endorsement on the back of the note must speak for itself and cannot be varied by verbal evidence of any different arrangement," the dentist's lawyer objected.

"Objection sustained and evidence rejected," the judge ruled—and the judge was right.

"It is well settled that, as a general rule of law, oral evidence is not admissible to contradict or vary the terms of a written contract. And, ordinarily, the written contract that is entered into by an endorser when he makes an unrestricted endorsement cannot be contradicted or varied by parol (oral) evidence," says one State court in laying down the rule.

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### Advice to Self-Made Failures

(Name of author known, but withheld)

Mathewson was one of the best pitchers of all times. He had speed. When his arm snapped the ball across the plate, the eye could scarcely follow the leather sphere in its flight.

Benny Leonard is the retired light-weight champion. Speed gave him his supremacy. He could beat his opponent to the punch every time, and many a man went down, never knowing what hit him. The knockout punch came with such sudden swiftness that it was never seen.

Take the case of my bootblack. I'll wager you don't enjoy getting a shine, but I do. That little darky smacks the backs of the brushes together, bangs the tin of paste a few times, and applies the polishing cloth with a series of pistol-shot reports that he accomplishes through clever clicking of the slack rag. Speed? Say, he's all speed! You get a fast shine, and I'm saying it's a good one, too.

Ride down from Albany on the Twentieth Century flyer. Boy, you sure do travel! Mile a minute, and smooth as a book agent. Stops for nothing. And when it hits New York, you can set your watch. You're in on time!

The world wants speed and is willing to pay for service. And this is true in dentistry just as much as anywhere else. More, if anything! People just hate to go to a dentist, and the sooner they are through the better they like it. And I want to tell you about a friend of mine who just finished up with a dentist. He told me that he wouldn't go back to that "guy" for *free* service.

"I would never go back to him if he was the last dentist in town," he complained. "He was the slowest, draggiest, snailiest man that ever did business with me. He knew his work. He was a good dentist, but he was so languid that he looked dizzy to me. I'll wager he went to his cabinet a dozen times for various instruments, answered a few 'phone calls and grabbed off a smoke in the laboratory every time I went to him. And conversation! He was worse than any barber. He thought it was necessary to explain every little thing he did, and he talked and talked every blessed minute. I got nervous, just hearing his voice."

Now, boys, there is a lot in that complaint. Why can't you make your efforts with a little speed? Don't tell me that it is necessary to be slow and painstaking to do exact work—that's "bunk"! If you really know what you are doing, it is amazing what you can accomplish if you work with full steam up and in high speed. Success and speed are great friends.

Get the work finished. Get rid of the patient as fast as you can. This means keeping him for at least a half-hour when he does come, but working effectively every minute of the time. If repairs or remakes are necessary, the patient will not complain if he hasn't been practically living in your office for months. The basis of success in dental offices is: "Let 'em in an' out." When the work is finished, the balance of the money is waiting. And good work can be done just as rapidly as poor work—it is only a question of ability.

## PRACTICAL HINTS

This department is in charge of V. C. Smedley, D.D.S., and George R. Warner, M.D., D.D.S., 610 California Building, Denver, Colorado. To avoid unnecessary delay, Hints, Questions and Answers should be sent direct to them.

NOTE—Mention of proprietary articles by name in the text pages of the *DENTAL DIGEST* is contrary to the policy of the magazine. Contribution containing names of proprietary articles will be altered in accordance with this rule. This Department is conducted for readers of the *DENTAL DIGEST*, and the Editor has no time to answer communications "not for publication." Please enclose stamp if you desire a reply by letter.

### *Editor Practical Hints:*

I have been interested in many articles that have lately appeared on "Pulp Therapy." I notice that you are opposed to "Devitalization," even when the pulp has reached the stage of passive hyperemia. This is, of course, contrary to Academic teachings, where Black is the chief authority.

Kindly answer the following questions:

1. How long have your methods been in use, and with what percent failures?
2. What are the exact proportions of your sedative mixture?
3. In view of recent researches pointing out that the pulp tissue is subject to nearly all pathological conditions of ordinary tissue, and that a pulp may be as much a source of focal infection as any apical or peridental infection, is it wise, theoretically, to treat a diseased pulp using your method?

I shall appreciate your viewpoint on this, the most important phase of dentistry.

C. H. M.

ANSWER.—The method of pulp conservation that I have frequently recommended under Practical Hints, and that Drs. French and Netherton referred to in their article in the June, 1925, issue of *THE DENTAL DIGEST*, has been in use in our office for over twenty-five years. The percentage of failures is very small. In fact, failures are almost entirely confined to border line cases where we realize at the time that we are taking long chances because of the badly-congested or breaking-down condition of the pulp tissue, or because of the poor vigor or lack of general vitality of the patient.

The formula of this sedative cement and pulp protector is Eugenic Acid, Thymol, Iodine, Oxide of Zinc and Bismuth Sub-Nitrate. It should be scientifically prepared of the purest obtainable ingredients.

The recent researches pointing out that pulp tissue is subject to infection even while retaining vitality should, in my opinion, be given careful consideration in all cases of patients with acute susceptibility manifesting serious systemic disturbances. With the comparably very few of this type of patients we may never be justified in capping an exposed pulp, especially one that has been exposed by decay or subject to any inflammation or congestion, but, on the other hand, it has been definitely demonstrated that pulp tissue contains a complete system of lymphatics as well as an ample blood supply, and there is no doubt that the average pulp is just as capable of physiologically combating and eliminating infection as any other tissue in the body.

I personally feel that with the procedure that we follow and advise the pulp of the tooth in the mouth of a vigorous, healthy person may have a better chance to eliminate such an infection than any other tissue, at least within the oral cavity, for our practice is to remove every vestige of decay, cutting down to healthy dentine walls even though part of the pulp is excised (without bruising or maceration) in doing so. I feel that a pulp is less subject to infection than most any other tissue in the body, with the severed pulp and clean dentine walls efficiently sealed with this non-irritating, antiseptic sedative cement, whose only activity tends to soothe and stimulate the pulp to normal functioning.—V. C. SMEDLEY.

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*Editor Practical Hints:*

Have received valuable help from your department and desire further information. I have a number of pyorrhea cases that show a rapid accumulation of tartar at the gingival on the teeth where the gums have receded. On the other teeth, with no recession of the gums, the tartar does not collect. I can thoroughly remove all tartar one day and in a week's time it has formed again as bad as ever. Patients tell me they are very particular in cleaning their teeth and cooperating with me in every way. One girl of nineteen years of age has a gum recession of an eighth of an inch over the lower central incisors, and I cannot keep the tartar off. These teeth were loose, but have tightened and the gums are healthy. Will surely appreciate hearing from you and any advice you may have to offer.

J. A. S.

**ANSWER.**—The collection of calcareous deposits upon the exposed portions of teeth may probably be related to two conditions. One is a

disturbance of the metabolism of the patient, probably due to over-eating, or at least to eating too large a proportion of carbohydrates and proteins. The other condition is inefficiency with the tooth brush. With the diet corrected to an amount which would not result in excessive calcareous deposits, and with a little more efficiency with a medium or hard brush, I believe you will have no further trouble with extremely rapid accumulations of deposits.—G. R. WARNER.

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*Editor Practical Hints:*

Through the Practical Hints department of THE DENTAL DIGEST I am sending you dental x-ray films of a patient (male) who came to me for extractions. Age 57.

This patient is suffering from anesthesia in his left hand and the soles of his feet. He also has very high blood pressure. He went to sleep in a chair for a few minutes; when he awoke, his left hand and part of the arm were paralyzed. He has some use of his hand now. The anesthesia developed later in the soles of his feet.

An M.D. was consulted but did not think the patient had been subjected to a paralytic stroke. The M.D. pierced the teeth in the films which he advised to be extracted.

It appears to me that the lower anterior teeth, and the upper left lateral incisor, have established channels leading from the bone area around these teeth. There is no fistulous opening that I could detect.

If this is rather unusual, and of interest to the readers of the DIGEST, you may use it for publication.

What would you advise in this case.

A. P. J.

**ANSWER.**—The periodontium around the mandibular incisors in your case show slight evidence of inflammatory process by not enough evidence to justify extraction. The radiolucent streaks throughout the bone are not indicative of a pathological process, but merely an exceptional thinness of the cortical bone. Sometimes this exceptional thinness in this region simulates a cyst, and very frequently it has the appearance shown in the radiograms which you submitted. The only teeth for which I can see any indication for extraction are the right superior lateral incisor and the left inferior second molar. The radiolucent area around the left inferior first bicuspid is apparently the mental foramen. This tooth appears to be vital and healthy.

—G. R. WARNER.

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*Editor Practical Hints:*

As a constant reader of THE DENTAL DIGEST, am seeking information.

I have a patient 28 years of age, whose posterior teeth are becoming quite loose. The gums and surrounding tissue are in a healthy condition. She has a full complement of teeth on the left side, with two missing on the right. I refer to the upper. Could you suggest a preventative measure?

H. E. C.

ANSWER.—Loosening of the teeth is due to destruction of the periodontium, which destruction must come from mechanical, bacterial or chemical causes. In the absence of any history of a chemical cause such as blood poisoning, you must look for bacterial or mechanical causes. The condition can best be ascertained by carefully-made radiograms. If there are deep pockets, the treatment will be in accordance with the depth of the pockets, the amount of traumatism, if any, the shape and length of the roots. If you will send me good radiograms of the entire mouth I will be glad to make a further and more definite diagnosis.—G. R. WARNER.

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*Editor Practical Hints:*

A patient came up to my office recently complaining of a severe pain on or around the right side of her face. Upon examination of the teeth, I found two small pit amalgam fillings in the upper right first molar which I put in a year-and-a-half ago. I removed the fillings to see if there was any decay under them. There wasn't a bit, the dentine being absolutely sound. Found no other decay whatever. Lower teeth have simple occlusal amalgam fillings which I put in at the same time. These I did not remove, because patient has pain only in upper jaw. Had X-rays taken, but these revealed nothing. Upon removal of the two amalgam fillings, patient said pain was gone. The patient soon returned, complaining of the same pain. She said she hadn't had any pain, or very little, at least, until a week after removing the amalgam and putting in cement. I am at a loss to know what to do, and am asking your advice on the case. Cold water held on the teeth seems to relieve the pain a trifle. Pressure on the tissues does not cause any more pain, nor any less. What do you suppose is the cause of this pain? What treatment shall I resort to?

R. P. N.

ANSWER.—The fact that cold water seems to relieve the pain in this case would indicate that one of the pulps, on that side of the face is in a congested or dying condition. You would be especially justified in drawing this conclusion if heat definitely causes the pain and cold stops it. Would suggest that you stick a good sized ball of base-plate guttapercha on the end of an amalgam plugger, heat it until

quite hot and apply it to the buccal surface of each tooth on that side, both upper and lower. If you find one abnormally sensitive to heat, test it to see if cold stops the pain. If so, I would not have much hope of being able to restore the tooth to normal, though I would certainly make an effort to do so. The fact that the pain is all on the upper jaw would not necessarily mean that the trouble could not be on the lower jaw. It quite frequently happens that the jaw opposite to the one the patient thinks, carries the cause of the pain.

When you have located the offending tooth, test it carefully for traumatic occlusion. (It would probably be well to grind this tooth so that it is practically free of occlusal contact.) Examine all surfaces beneath the free margins of the gums all around as well as proximal and occlusal surfaces for decay. If you find a cavity, excavate it thoroughly and fill it with a thick mix of sedative cement (formula of which was published in former issues of *THE DENTAL DIGEST*) over a small pellet of cotton moistened with the liquid of sedative cement.

The fact that the pain stopped after the replacement of the amalgam fillings with cement would seem to indicate that it is one of these teeth that is in trouble, though this might not necessarily be the case.

I would, as you might judge, have filled these cavities, after removal of the amalgam, with this sedative cement rather than with ordinary oxyphosphate, in an effort to soothe the tooth to comfort.

Pulp stones and nerve pressure from an impacted third molar are other possible causes of this discomfort.—V. C. SMEDLEY.

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*Editor Practical Hints:*

Would you please tell me if there is a way of repairing a celluloid plate without a special vulcanizer?

J. C. G.

**ANSWER.**—This depends on the nature of the repair. If it is a tooth to be replaced it can be done quite satisfactorily by cutting a dovetail anchorage into the plate and packing amalgam thoroughly into the anchorage preparation and about the pins of the tooth. If it is a crack through the body of the plate you had better recommend a new plate as new celluloid does not adhere satisfactorily to old, even where a special celluloid vulcanizer is used.

I have repaired combs and other celluloid articles with liquid celluloid (a solution of celluloid and acetone) and had them hold together quite satisfactorily, but never tried this on a plate, but there would be no harm in your trying it if you wish to, especially if you agree with me that a vulcanized repair is unsatisfactory and that if this simple method will not hold a new plate will necessarily have to

be made. Simply place a generous application of the liquid celluloid in the fractured joint and let it rest, held without motion, for from twenty-four to thirty-six hours. Excess can then be polished off and it would look about like new, but there would be some question as to its strength.—V. C. SMEDLEY.

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*Editor Practical Hints:*

A patient about 55 years of age came to me with a swollen face caused by an acute abscess in the region of the 1st and 2nd right upper molars. Am enclosing X-rays and will appreciate very much if you will give me your opinion on same. Please advise which tooth caused the above condition, or are both involved? If so, what will be the best thing to do? The 1st molar carries a gold shell crown with bar attached for a Gilmore attachment. Is the rarefaction on the anterior portion of the 1st molar bad enough to make it necessary to remove crown in case it is not infected? Patient does not want to lose the teeth.

P. A. F.

ANSWER.—Due to the angle at which the x-ray is taken, showing both the first and second molars, it isn't possible for me to tell the line of demarcation between the two, as there is an overlapping. Therefore I can't say whether the second molar is affected or not. The first molar is perfectly hopeless, the membrane is diseased around all three roots, and the only safe thing to do with it is to extract it. The other radiogram shows a small root in the region of the first bicuspid.

—G. R. WARNER.

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*Editor Practical Hints:*

Reading Practical Hints, I came upon the case of Dr. M. K. and your answer, which interested me very much indeed, having in my family a case similar to your No. 2—Mrs. W.

My mother-in-law has had two very severe attacks of pain in the infraorbital region, about foramen, with some inflammation, pain starting or increasing with food taken, liquid or solid. Teeth apparently healthy.

Different medicines and local applications of hot and cold temperatures are of no avail. Would an injection of novocain followed by one of alcohol do in this case? What quantities?

E. R. L.

ANSWER.—Your description of the pain which your mother-in-law suffers, together with what seems to be the presence of a "touch" spot,

would indicate that she has Ticdouloureux. It is quite possible this can be controlled by an infraorbital injection. Inject about 2 cc. of novocaine for diagnostic purposes; if this relieves the pain you can then inject the alcohol. About sixty-hundredths cc. of the alcohol solution will be sufficient if you get it in the nerve. If you do not get it in the nerve you will not get a permanent result. The following prescription makes an alcoholic solution which is permanent in its effect, and less painful to inject than pure alcohol.

Novocain .....	2 percent
Chloroform .....	5 "
Alcohol .....	70 "
Aqua Purae .....	23 "

—G. R. WARNER.



## CORRESPONDENCE

Brooklyn, N. Y.

*Editor, DENTAL DIGEST:*

I wish to report an interesting case, which once again emphasizes the relation existing between the teeth and their environs with other organs of the body.

Mr. M. G., aged 24, presented with trouble in his upper left central in April, 1926. A radiograph disclosed that the tooth had a slight apical involvement. Because of the fact that the tooth was in the foremost central part of the mouth, the patient did not desire extraction and we attempted to proceed with our root-canal technic. The canal was opened and treated with great antiseptic care. The patient was very irregular, however, in his visits and he called twice only in April and once during May for treatments. Early in June he *lost complete sight* in his left eye.

The central was extracted on June 4th. For five days after, the blindness continued, but on the sixth day he could distinguish between light and dark.

No great improvement followed until June 18th, when he began to see objects near by. Improvement from then on was gradual, and from July 5th on his sight was completely restored.

During the course of development from loss to regaining of sight the patient was also under the care of a rhinologist and an ocular specialist, who found as a complication a frontal sinusitis, the symptoms of which disappeared with the return of vision.

S. J. BREGSTEIN.

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Shenandoah, Iowa.

*Editor, DENTAL DIGEST:*

In the several activities of Broadcasting Station KFNF we have a health lecture service.

Five times a week we have health talks and among them we have every Wednesday morning at 7:40 the lecture of that day given by Dr. E. R. Stealy of this place, one of our local and substantial dentists, who makes this weekly talk along the line of dentistry and its relation to health. Dr. Stealy is doing fine work and the thousands of listeners appreciate it. We have also a weekly talk by a medical doctor and other talks on diet, etc. This may be of interest to your readers.

JAMES PEARSON.

## DENTAL SECRETARIES and ASSISTANTS

### Secretaries' Questionnaire

All questions and communications should be addressed to Elsie Pierce, care of THE DENTAL DIGEST, 220 West 42nd Street, New York City.

For the dental assistants who assist in the laboratory we are in receipt of the following suggestion for comparative safety in obtaining thin vulcanite dentures:

"Substitute lead foil over the palatal surface of the model (stone or plaster) for the usual baseplate wax. Lead foil suitable and practical for this use may be obtained from the inside of cases in which tea is shipped. It is a heavy lead foil. Some supply houses carry a lead foil for this purpose. Cut to fit the shape of the palatal surface as many layers as you need for the required thickness, and adapt firmly into place with a suitable instrument. Following this, seal union of foil and base wax with a hot spatula. By this method you will secure uniform thickness. It also enables the plate to be made comfortably thin without danger of perforating in finishing. Skilled laboratory mechanics can no doubt secure this result with the wax and spatula, but lead foil used in the manner prescribed will positively insure success for one who is not so experienced."

"To obtain a smooth polished finish on the palatal surface of all dentures, adapt tin foil of a thin gauge to the model, leaving the brighter surface up, so that it comes in contact with the rubber. Lightly paint the foil with a creamy solution of soap and water. This aids in the easy removal of the foil after vulcanizing."

E. E., New Hampshire.

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*Please tell me what to use to remove hardened cement, etc., from glass slabs and agate spatulas. The doctor takes a patient or two in the evening, and by morning when I get to the office I find it very hard to clean this equipment without scraping, which I know eventually scratches the surface of the glass and makes it unfit for use in the use of synthetic porcelains.*

B. L. M., Jersey City.

A saturated solution of bicarbonate of soda will remove dry cement from glass slabs and spatulas. No scraping will be needed. Keep the solution in a jar, into which you can strain that which you have used. A shallow white enamel tray large enough to hold several slabs while they are being wet with the solution can be purchased in any department store.

*I should like to know the proper way to receive a patient. Also what I should do to help at the chair. I cannot see my way clear to go away to study to be a dental assistant. Could I take a course at home? Would you think it advisable to take up the work of dental hygiene?*

*Do you know of any association in Columbus, Ohio, that I could join? I should like to get in touch with other girls who are in dental offices.*

C. G., Ohio.

In reply to your first question, as to how to receive a patient in a well-organized and well-conducted dental office employing a young woman assistant, it is her duty to receive the patients either at the door or in the reception room, call them into the operating room, see that they are properly seated in the chair, and that all is in readiness for the treatment to be given. The doctor should come into the operating room only when all is ready. A pleasant "good morning" or "good afternoon" and a generally cheerful manner are quite sufficient for a greeting. Patients are not personal visitors, and unless they indulge in conversation it is quite out of place for the assistant to do so. If the patient is of the confidential, talkative type, the assistant should endeavor to keep her part of the conversation brief and impersonal. In a busy dental office there is no time to waste in long conversations that have no bearing on the business in hand. By this I do not mean that you should assume an attitude of superior dignity, for this would be just as out of place as overfriendliness or effusiveness. It is rather difficult to describe the exact attitude, but perhaps a quiet, friendly reserve comes nearest to describing it. It is well for the dental assistant to remember that her position in the dental office is primarily one of business assistant to the dentist. It carries with it some social requirements, but these should be carefully exercised and her conduct must always be such as will aid the dentist in his professional service.

When a new patient comes to the office, one who has never met nor spoken to the doctor before, the assistant can say, "Dr. Blank, this is Mrs. — or Mr. —, who has been referred to you by Mr. — or Mrs. — or Dr. —." This courtesy makes it possible for the

doctor to greet the patient immediately by his given name and sets both more at ease.

The dismissal of a patient also should be pleasant and cheerful, no matter what has taken place. Some patients are exceedingly nervous and hysterical and cause a great deal of confusion. This, however, should not make any difference in the bearing of the office personnel. A young woman who cannot maintain at all times an appearance of poise, tact, cheerfulness, willingness, and neatness has no place in a dental office.

Your second question as to how to help at the chair, was answered in the April issue of *The Dental Digest*, page 264, in reply to A. H., of Pittsburgh, Pa.

I do not know of any dental department in any college or university giving extension home courses in dental assisting. If you are financially able, can take the time, and have the preliminary high school requirements, I see no reason why a course in dental hygiene would not be advantageous to you. Some general office-assisting is combined with the dental hygiene courses as offered by several of the universities.

We do not know of a dental assistants' society in Columbus, Ohio. However, there are societies for dental assistants in Cincinnati, Cleveland, Akron and Toledo. Why do you not interest other dental assistants of Columbus to join with you and form an organization such as these mentioned? They are educational in purpose and doing fine work in raising the standard of service to the dental profession.

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### Leaves from the Notebook of Janet Cross, a Dental Assistant

May 17, 1926. I've just put the finishing touches to the paper that I have prepared to present before the Public Speaking Class. We have formed the fourth class in public speaking and parliamentary procedure, in our Dental Assistants' Society, and we meet every Thursday evening at 7:30. Now my lessons for tomorrow night are all prepared. My lessons—sounds like the good old school days!

I think of the Society as my school, where I am pursuing studies in dental assisting. We members are the students, the officers are the faculty, of which the president is dean and the others are her assistants. The committees form the student self-governing organization, the instructors are visiting professors, and the chairmen are the student officers. The entrance requirements are not heavy—just a sincere ambition to succeed and a habit of perseverance and unselfishness. An atmosphere of good-fellowship and happiness in service to others per-

vades my college, and the students are known to imbibe freely of the spirit. However, it is non-intoxicating, although it is a wonderful stimulant to greater endeavor! The curriculum consists of courses in the various phases of dental assisting, secretarial duties, chair assistance, laboratory assistance, x-ray assistance, sterilization, public speaking and parliamentary procedure, and so on, but by far the most popular is the course on "how to gain a truer perspective of the calling of dental assistant and to acquire a clearer conception of its possibilities for service." This course is conducted each month at the regular assembly and is attended by the entire student body, regardless of whatever other courses each one is taking. Graduation is being constantly deferred because there is always some new course being added to the curriculum, and even those students who consider themselves graduates remain on for postgraduate work. Our Dental Assistants' Society certainly represents college for its members!

Happy times we have at this college, too. What wonderful reunions are these regular assemblies! And what jolly evenings are those spent in class! Study is combined with play. Attending class means renewing friendships, as well as gaining knowledge in the subject being studied. Many happy memories have I of evenings spent at former speaking classes, when we fought hard and long to win our debates and each one strove to surpass the other in achievement, but afterward teased one another or planned holidays together. And all went to make us better women, better dental assistants!

But to come back to earth, I firmly believe that the time is not far off when the universities will open their doors to young women who wish to follow the profession of dental assisting. In the meantime, the dental assistants' society, properly conducted, is the dental assistant's college, working toward the aim of imbuing the mind with a keen appreciation of the fineness and nobility of her calling and fitting her for greater and more efficient service to the dental profession and to those whom that profession serves.



## EXTRactions

No Literature can have a long continuance if not diversified with humor—ADDISON

When night falls nothing is broken—  
except laws.

“Now, Tommy, I want you to be good  
while I’m out.”

“I’ll be good for a nickel.”

“Now, Tommy, you never can be a  
real son of mine unless you are good for  
nothing.”

(Young Mrs. Green—at bank teller’s  
window)—I wish to open an account  
here.

(Teller)—Very well, madam. How  
much do you want to deposit?

(Mrs. Green)—Why, nothing. I want  
to draw out \$40.

It is sad to see the little calves in  
green pastures and think how soon they  
will be chicken salad in some restaurant.

(Old Ad-em-up)—Just think, every  
time I breathe somebody dies!

(Friend)—Why don’t you use lister-  
ine?

A boy who had been absent from  
school for several days returned with  
his throat carefully swathed, and pre-  
sented this note to his teacher:

“Please don’t let my son learn any  
German today; his throat is so sore he  
can hardly speak English.”

The day after the new farmer had  
sent his two children to school the book-  
seller’s representative called.

“Now your children go to school,”  
he said, “you ought to buy them an  
encyclopaedia.”

“Buy ‘em an encyclopaedia?” was the  
reply. “Hanged if I do. Let ‘em walk,  
like I did.”

The first mention of baseball is in the  
Bible. Eve stole first, Adam stole sec-  
ond, Gideon rattled the pitchers, Goliath  
was put out by David, and the prodigal  
son made a home run.

(Office Boy to waitress).—Whatya got  
with onions in it? I got the afternoon  
off the last time I ate onions for lunch.

“The robber wore rubbers and walked  
backwards,” deduced Hawkshaw.

“Ah! Then we must look for a man  
with receding gums.”

### SOME GOLF STUFF

After the pompous old banker had  
finished the game, he said to the caddie:  
“Notice any improvement since last  
year?”

(Caddie)—‘Ad yer clubs shined up,  
‘aven’t yer?’

Some links have so many water haz-  
ards that players merely go around them  
for the boat ride.

Other courses have such broad ex-  
panses of sand that we frequently won-  
der why they don’t keep a camel.

### YOU NEVER KNOW WOMEN

“Why did you divorce your husband?”  
asked Belle’s friend.

“Well,” replied Belle, “he got mad one  
morning and pulled my hair, hit me,  
and then threw me downstairs.”

“No wonder you divorced him!”

“Oh, I didn’t mind that so much, but  
to cap the climax, he walked off with-  
out kissing me goodby.”

An English country parson advocates  
requiring his congregation to stand  
while sermons are being delivered, in  
order to prevent the members of his  
flock from going to sleep.

(Publisher)—In your story I notice  
you make the owl hoot “to whom” in-  
stead of “to whoo.”

(Author)—Yes, this is a Boston owl.

### THAT SUMMER FEELING

It wearies me to take a walk,  
For when I move around  
I always have to lift my foot  
And put it on the ground.

### WHAT THE FORD PLANT DOES TO A TON OF COAL

In Henry Ford’s Detroit plant a ton  
of bituminous coal is converted, in four  
minutes, into 8,000 feet of gas, 10 gal-  
lons of gasoline, 20 pounds of am-  
monium sulphate, 30 gallons of crude  
light tar, 3 gallons of creosote oil, 2  
gallons of lubricating oil and 10 pounds  
of grease.

The 1,500 pounds of coke which is  
left can be utilized for many purposes.  
The market value of the products is  
\$13.56. The coal costs the Ford Com-  
pany about \$5 a ton, delivered.

## DIETETICS and HEALTH

### The Nervous System and Nutrition

#### MAJOR EMOTIONS

In the environment of civilized life there are far too many people who are constantly under the influence of the major emotions. These are fear, anger, pain, and hunger. Under normal conditions the first three are by far the most important in their effects upon the nervous system of the adult. Children are not infrequently considerably disturbed nervously by hunger.

#### PSYCHIC CONDITION AND EATING

It is commonly advised that people should see to it that they have pleasant company at mealtime. This makes possible the enjoyment of the food and creates the proper psychic conditions which enable the digestive apparatus to do its work well. It has been suggested that, from the psychic standpoint, it is unfortunate that so much of the food is cooked outside the home. The odors of cooking food at mealtime approaches, tend to create an anticipation of eating which produces a proper psychic condition for the secretion of the digestive fluids, and consequently promotes the utilization of food. Pleasant conversation with agreeable company at the table leaves the digestive glands free to work without interference from the central nervous system.

#### UNPLEASANT EMOTIONS AND DIGESTION

Since any unpleasant emotions interfere so seriously with the digestion it is wrong to scold children or to discuss matters relating to discipline at the table. Business affairs, especially if they involve questions which give concern, should be put aside at mealtime. A mother recently told of her rule never to scold or punish the children until later if they disobeyed her just before eating time, but after an interval of two hours or more from mealtime the hour of reckoning came. Such a plan is to be strongly recommended to all mothers.

## FEAR AND INDIGESTION

One of the serious problems of the physician who treats a patient with digestive disturbances is to divert the patient's attention from himself. The dyspeptic spends much time telling about his sufferings, and about what foods disagree with him. In general his ideas about certain foods not agreeing with him are purely fanciful. The distress which follows eating them is the result of fear. This would, of course, not be true where actual disease of the digestive system exists. The inhibition may be effective enough to permit of bacteria flowering out in the contents of the alimentary tract, resulting in gas production and in the formation of unwholesome products which abundantly confirm the prediction of the sufferer that he knew what he could not eat without danger. The successful physician treating such a patient is often able to dispel this fear. The patient is then much surprised to learn that he can eat with impunity and enjoyment a number of foods from which he had abstained.

## DANGER OF RESTRICTING THE DIET

Those who, because of fear or because of actual disease of the digestive tract, suffer much from indigestion not infrequently eliminate one thing after another from the diet until they come to subsist upon a very simple and restricted list of foods. In general the diet becomes inadequate from the chemical standpoint and malnutrition results. The nervous system may be profoundly influenced by malnutrition due to lack of any one of a number of nutrient principles, especially by lack of vitamins B and C, and by lack of sufficient calcium. Too little calcium and too much phosphorus in the diet is to be avoided. The taking of a properly constituted diet every day is, therefore, one of the most effective ways of preserving the nervous system.

## THE WHOLESOME ATTITUDE TOWARD LIFE

There can be no better advice about safeguarding the digestion than the daily practice of the fundamental principles of religion. Among the special precepts is to take no thought for the morrow, i. e., stop worrying. The doing of good works; the relaxation of mind and body, and the exercise of disinterested philanthropy are the most effective means of restoring to normal functioning a digestive system which is debilitated by dietetic errors and misused by the major emotions.

—*Food, Nutrition and Health*, by McCollum and Simmonds.





*Index of Periodical Dental Literature*, compiled by Arthur D. Black, A.M., M.D., D.D.S., Sc.D., Dean of Northwestern University Dental School, Chicago, Illinois. This book is an index of the periodical dental literature published in the English language, including fifty-three publications in England, Canada and the United States, for the five years from 1886 to 1890, and is published under the auspices of the American Association of Dental Colleges, American Dental Association, Research Commission of the American Dental Association, British Dental Association, Canadian Dental Association, New Zealand Dental Association and Society of Dental Science of New South Wales. This volume is the fifth of the series to be published, the first volume covering the literature for 1911-1915, the second 1916-1920, the third 1839-1875, the fourth 1876-1885, and is uniform in size, binding and general character with the previously published volumes. It contains a classified subject index and an alphabetical author index, as well as a list of the dental books reviewed during the five-year period.

In the introduction, under the heading *The Development of the Index and Its Use*, Dr. Black writes as follows: "While I was in dental college in 1897, I realized that a very considerable library of dental periodicals was almost useless because it was practically impossible to find the articles which had been written upon any subject. A study of the situation made it apparent that much valuable work, needed for the future development of the profession, would be lost if a plan were not formulated by which the writings of the past could be made easily accessible. This seemed to me to be of great importance to the progress of the profession. . . .

"It is quite certain that a search of the literature on almost any subject on which one would write today will reveal much of value that might cause considerable rearrangement of the views of the reader, might lead him into new angles of thought which would change the character of his writing and make the article of greater worth, because it would more likely fit into its proper place as a link in the development of the profession along a particular line.

"The publication of the Index should also remind the writer of today and tomorrow that his article will soon be listed in an index, alongside all others on the same subject, and if he would have his

survive, he must put into it the study and effort which will command the attention and respect of those who read it in future years. . . .

"The Index offers the opportunity to study the literature of the past, to give credit to those who laid the foundation upon which dentistry stands today, and to improve our service for the future. If used as it should be, every article to be hereafter published should be a more valuable article than it would be without the Index."

The introduction contains also a *List of Journals Indexed for the Years 1886-1890* by William Bebb, Librarian of Northwestern University Dental School; *A Review of the Activities of the Dental Index Bureau* by Abram Hoffman, Secretary-Treasurer of the Administrative Board of the Dental Index Bureau; and *The Advent of Dental Literature* by B. W. Weinberger, Librarian of the First District Dental Society, New York, N. Y.

The Index comprises 521 pages. Published by the Dental Index Bureau, 381 Linwood Avenue, Buffalo, N. Y., 1926.



## FUTURE EVENTS

THE ST. LOUIS STUDY CLUB OF DENTISTRY will open its 1926-1927 term on Wednesday evening, October 6, 1926. Sessions will be held every other week, from eight to ten o'clock, in the Dental Department of the St. Louis and Washington Universities, from October to April.

The St. Louis Study Club, organized in February, 1919, is maintained for the purpose of giving advanced dental courses to ethical dentists without charge. Its popularity is attested by constantly increasing attendance and its support by the members of the profession. The enrolment for the 1925-1926 term numbered one hundred and forty.

The only requisites for enrolment are the desire on the part of the dentist to improve his efficiency and his willingness to complete the technical work assigned by the instructor in the time prescribed. The plan of allotting technical work for each student to complete in his own office and then bring to the class session for the constructive criticism of the instructor has proved to be practical in giving the best results with the minimum expenditure of time.

The following are the subjects and instructors for the next term:

Dental Ceramics .....	{ R. C. Seibert W. P. Joenk
Fixed Bridgework .....	
Full Dentures .....	G. B. Scott
Dental Roentgenology .....	{ B. O. Haun E. B. Owen
Operative Dentistry .....	
Dental Prophylaxis .....	C. A. Le Master
Rizadontia .....	{ J. W. Ford E. H. Eden
Conduction and Local Anesthesia.....	
Dental Economics .....	{ W. A. Chamberlain J. A. Walther
Cavity Preparation and Tooth Form.....	
Oral Diagnosis and Diseases of the Mouth.....	R. C. Wheeler
Virgil Loeb	

The officers are: W. H. Wells, President; J. W. Ford, Vice-President; A. T. Gast, Secretary-Registrar; J. A. Walther, Treasurer; H. R. Faherty, Historian; F. C. Rodgers, Founder and Honorary President.

Bulletins descriptive of the Study Club may be had by addressing Dr. F. C. Rodgers, 309 Wall Building, St. Louis, Mo.

The first meeting of the EDUCATIONAL AND EFFICIENCY SOCIETY FOR DENTAL ASSISTANTS, New York, for the 1926-1927 season will be held at the Academy of Medicine, 17 West 43d Street, New York, on Tuesday evening, October 12, 1926, at eight o'clock. A cordial invitation to attend is extended to members of the dental profession and to their assistants.

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THE CONNECTICUT DENTAL COMMISSION will meet at Hartford, Connecticut, on November 16, 17, 18, 1926, to examine applicants for license to practice dentistry and dental hygiene and to transact any other business proper to come before them.

Attention of dental hygienists is called to Section 11 of the Connecticut Dental Laws, Chapter 2907 Amended, reading as follows: "From July 1, 1926, every dental hygienist applying for a license shall present a certificate from the state board of education that she has completed a four years' course at an approved high school, or has an equivalent academic education. No license shall be issued to any dental hygienist unless she shall present a diploma or other certificate of graduation from some reputable institution. The dental commission is authorized to determine the institutions which shall be considered 'reputable institutions' for the purpose of Chapter 153 of the general statutes."

For further information, apply to A. B. Holmes, Recorder, 43 Central Avenue, Waterbury, Connecticut.

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THE STATE BOARD OF REGISTRATION AND EXAMINATION IN DENTISTRY OF NEW JERSEY will hold its regular examinations at Trenton, commencing December 6, 1926, and continuing for five days thereafter. The license fee is \$25.00; re-examination fee, \$10.00.

Practical tests required: Insertion of an approximal gold filling with the approximating tooth in position, compound approximal amalgam filling and a silicate filling, the candidate to furnish his own patient; taking of impression, bite, selection of teeth, articulation, trial plate, the candidate to furnish his own patient; practical examination in mouth diagnosis.

Attention is directed to the following quotation from the dental law of New Jersey: "Applicant shall present to said Board a certificate from the Commissioner of Education of this State, showing that before entering a dental college he or she had obtained an academic education consisting of a four-year course of study in an approved high school or the equivalent thereof."

In accordance with this law, the secretary will issue application blanks only upon presentation of the required certificate from the Commissioner of Education, State House, Trenton, New Jersey.

Application must be filed, complete, ten days before the date of the examinations.

Address all communications for further particulars to

JOHN C. FORSYTH, *Secretary*,  
148 West State St., Trenton, N. J.

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The next regular meeting of the NORTH CAROLINA STATE BOARD OF DENTAL EXAMINERS will be held at Raleigh, beginning promptly at nine o'clock, January 10, 1927. For application blanks and further information, address

H. O. LINEBERGER, *Secretary*,  
Raleigh, N. C.